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SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

U. S. Department of Agriculture

No. 1

WASHINGTON, D. C., DECEMBER 16, 1931

WINTER 1931-32

CLIMATOLOGICAL DIVISION OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

REVIEW OF SNOWFALL CONDITIONS FOR THE SEASON TO DATE

Practically no snow fell anywhere in the country during September, save that some high mountain portions of the far West had appreciable falls, chiefly late in the month.

October was so mild that the snowfall was of small consequence, except in a few regions. It was mainly during the final fortnight that snow occurred over considerable areas in the far West, though it was important, as a rule, only at some high stations.

November was milder than ever before known over most of the eastern half of the country, but nearly everywhere west of the Continental Divide was colder than normal, usually to a marked degree. There naturally was more snowfall, compared with normal, in the West than in the East, but the first 10 days were substantially free from snowfall in every State. The middle decade brought considerable snow in portions of the Rocky Mountain and Plateau regions, Salt Lake City, Utah, measuring a foot, while a little snow occurred from North Dakota to the vicinity of Lake Superior.

The final decade of November saw snowfall over nearly all of the far West, save the least elevated portions, more than 4 inches occurring at El Paso, Tex., and almost 15 inches at Denver, Colo. In the Plains, likewise, snow reached almost every portion, though amounts were only light to moderate in the southern and east-central parts. Scarcely any snow was seen anywhere south of the Ohio River and of the northern portions of the Virginias, but by contrast a strip from the lower Missouri Valley eastward to central Pennsylvania received from 2 to 6 or 7 inches on the 26th and 27th, the fall being considerably greater than over a large area somewhat to the northward. At the close of November hardly any snow had yet fallen over Wisconsin, lower Michigan, the vicinity of Lake Ontario, or the interior of New England.

During the opening fortnight of December snow fell in varying amounts in nearly all the more northern districts of the country. In an area from eastern Iowa to the vicinity of Lake Michigan, and also in most of the Middle Atlantic States, there were light falls on the 8-9th, but succeeding warmth soon melted practically all of this. The region between the Rocky and the Sierra Nevada and Cascade Mountains received snowfall about the 11th, some southern stations reporting quite heavy falls. On the 13-14th an area from eastern Nebraska and northern Missouri to the shores of Lake Michigan recorded a light snowfall.

DEPTH OF SNOW ON GROUND

The more northern parts of New England and New York, much of the Lake region and the upper Mississippi Valley, and well-nigh all the Missouri Valley now have a light cover, save that a few small portions report from 6 to 10 inches. In the far West there is now considerably more snow than at this date either last year or two years ago, for hardly a station to northward of central Colorado, Utah, and Nevada now reports bare ground, and many southern stations of but moderate elevation have a deep cover. Not much of the range is now bare, save near the Mexican border.

ICE IN RIVERS AND HARBORS

Less ice has formed in the rivers and lakes from the North Atlantic States to Minnesota and Iowa than usual at this date, the harbors of the Great Lakes in particular being still nearly all quite free. In the Dakotas, on the other hand, the ice has already attained moderate thickness for the middle of December.

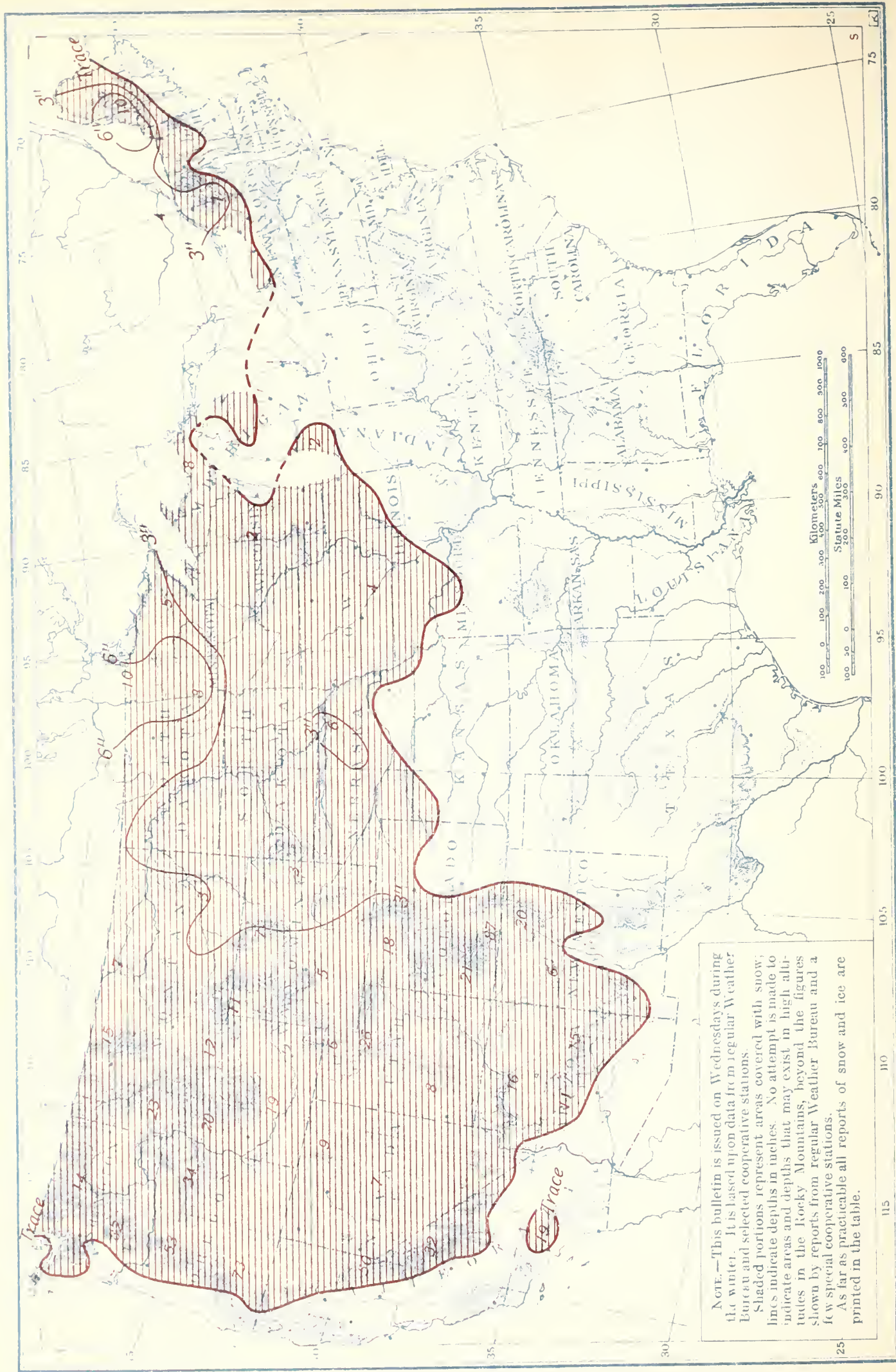
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., DECEMBER 14, 1931

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Nebraska</i>	<i>Inches</i>	<i>Inches</i>
Eagle	11	.....	Broken Bow	3	.....
Fairbanks	21	27.5	Imperial	2	.....
Nome	30	20.0	Norfolk	2	.....
Tanana	42	.....	Omaha	T.	0.0
<i>Arizona</i>			O'Neill	6	.....
Flagstaff	14	.....	Valentine	2	.....
Grand Canyon	16	.....	<i>Nevada</i>		
Pinedale	15	.....	Austin	7	.....
Prescott	11	.....	Elko	5	.....
Williams	14	.....	North Fork	9	.....
<i>California</i>			Reno	1	.....
Big Creek	10	.....	<i>New Hampshire</i>		
Blue Canyon	20	.....	Hanover	2	.....
Huntington Lake	32	.....	Pittsburg	9	.....
Macomber	20	.....	Woodsville	2	.....
McCloud	8	.....	<i>New Mexico</i>		
Mount Wilson	19	.....	Aurora	8	.....
Soda Springs	50	.....	Bluewater	6	.....
Squirrel Inn	16	.....	Chama	66	.....
<i>Colorado</i>			Elizabethtown	7	.....
Crested Butte	26	.....	Santa Fe	3	.....
Cumbres	87	.....	Truchas	20	.....
Durango	20	.....	<i>New York</i>		
Rico	21	.....	Canton	4	.....
Steamboat Springs	18	.....	Old Forge	7	.....
<i>Idaho</i>			Rochester	T.	0.0
Big Creek	14	.....	<i>North Dakota</i>		
Hailey	11	.....	Bismarck	2	11.0
Idaho City	15	.....	Williston	2	13.0
Ketchum	14	.....	<i>Oregon</i>		
Pierce City	23	.....	Austin	23	.....
Soldier Creek	19	.....	Baker	13	.....
Spencer	17	.....	Crater Lake	73	.....
<i>Illinois</i>			Detroit	12	.....
La Salle	1	.....	Government Camp	53	.....
Pontiac	1	.....	Imperial Mine	34	.....
<i>Iowa</i>			Olive Lake	26	.....
Albia	4	.....	Siskiyou	10	.....
Des Moines	1	*	Wallowa	6	.....
Dubuque	0	†	<i>South Dakota</i>		
Marshalltown	2	.....	Huron	1	8.0
<i>Kansas</i>			Pierre	1	10.0
Goodland	3	.....	<i>Utah</i>		
<i>Maine</i>			Cedar City	4	.....
Farmington	2	.....	Deseret	8	.....
Greenville	10	0.0	Manti	8	.....
Millinocket	3	.....	Ogden	7	.....
<i>Michigan</i>			Salt Lake City	10	.....
Bessemer	3	.....	Silver Lake	26	.....
Bloomington	2	.....	Watson	6	.....
Grayling	2	.....	<i>Vermont</i>		
Houghton	1	0.5	St. Johnsbury	2	.....
Kalamazoo	2	.....	White River Junction	1	.....
Munising	8	.....	<i>Washington</i>		
Sidnaw	3	.....	Chesaw	13	.....
<i>Minnesota</i>			Paradise Inn	82	.....
Baudette	4	.....	Spokane	7	.....
Collegeville	2	.....	Twisp	14	.....
Duluth	T.	6.0	Yakima	7	.....
Leech Lake Dam	9	.....	<i>Wisconsin</i>		
Moorhead	8	7.0	Green Bay	0	1.0
Roseau	10	.....	Medford	2	.....
St. Paul	T.	*	Rhineland	2	.....
Virginia	5	.....	Wausau	2	4.0
<i>Montana</i>			<i>Wyoming</i>		
Belton	15	.....	Cody	4	.....
Big Timber	4	.....	Dixon	6	.....
Bozeman	10	.....	Dome Lake	7	.....
Dillon	12	.....	Evanston	5	.....
Missoula	4	.....	South Pass City	5	.....

*Shore ice. †Floating ice. ‡Ice gorged. \$Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., December 14, 1931



SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 2

WASHINGTON, D. C., DECEMBER 23, 1931

WINTER 1931-32

CLIMATOLOGICAL DIVISION OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents,
Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED DECEMBER 21

No storms during the week caused snowfall of great importance over any large area, though several districts in the Northeast received moderate snowfalls on one or more days, and the northern portion of the upper Lake region reported some snow on the 19-20th. In the western half of the country there was snowfall in northwestern Texas, eastern New Mexico, and adjacent districts on the 15-16th, while the northern and western portions of the Plateau region experienced snowstorms during the middle of the week and near the end. At many of the more elevated stations in the Pacific and Plateau States the snowfall was of considerable amount.

In most of the areas where measurable snowfall occurred during the week, apart from the far Northwest, mild weather succeeded and the snow soon disappeared. In northern New England, however, the temperatures were not high enough to take away much snow, and increased depths resulted at more than half of the places from which reports are received.

DEPTH OF SNOW ON GROUND

Considerably more than half of Maine, New Hampshire, Vermont, and central and western Massachusetts is covered with snow, but the depths are small save in northern Maine and in the higher portions. In New York snow at this time is confined to the Adirondacks and the vicinity of the Canadian boundary east of Lake Ontario. Small portions of Wisconsin and northern Michigan, but large areas in Minnesota and Nebraska and most of the Dakotas, have snow on the ground, but the depths are very small here, except in northern Minnesota and the adjacent part of North Dakota. In the eastern parts of Montana and Wyoming nearly all stations report a little snow. From the Rocky Mountains to the Cascade and Sierra Nevada there is a snow cover nearly everywhere north of central New Mexico and Arizona, only a few places at low levels noting bare ground.

Snow is now found at but very few points where there was bare ground a week ago. On the other hand, much of western New York, lower Michigan, the upper Mississippi and lower Missouri Valleys, and western Kansas have lost the slight cover which they then had; and depths decreased, often by more than a foot, from central Colorado and north-central New Mexico westward to the mountains of California, save at a few places. It seems likely, however, that there has been no marked loss of the water content outside of the lower portions of the area which was covered last week. A few lofty stations in the Pacific Northwest report depths increased by a foot or more.

ICE IN RIVERS AND HARBORS

In central New England and the Dakotas temperatures were low enough to cause small additions to the ice noted last week, and a few stations now have measurable ice which lacked it a week ago. In Wisconsin and adjacent parts of other States, by contrast, there has been partial loss or complete disappearance of the little ice noted on the 14th.

At the present time the ice situation is unusual for late December, with the Mississippi River and the Great Lakes almost completely without ice, while the lower Missouri and the Ohio Rivers, and also almost all streams of the Middle Atlantic States and southern New England, are not frozen anywhere. The Missouri River in the Dakotas, however, has usually about a foot of ice, and 16-inch ice is measured on Moosehead Lake, in Maine.

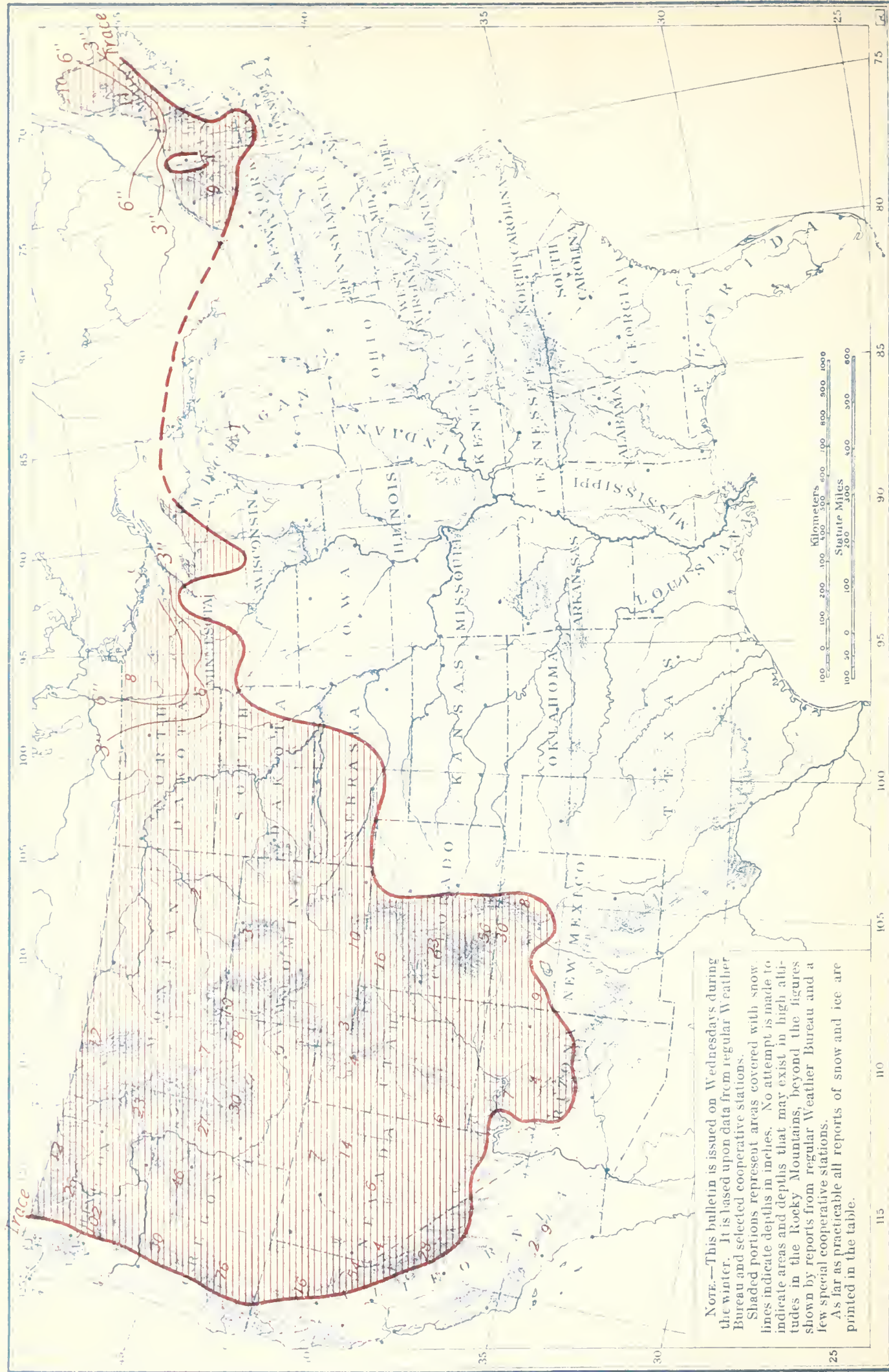
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., DECEMBER 21, 1931

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Montana</i>	<i>Inches</i>	<i>Inches</i>
Barrow	8	.....	Belton	12	.....
Bethel	14	.....	Bozeman	7	.....
Eagle	20	.....	Dillon	7	.....
Fairbanks	22	27.0	Haugan	17	.....
Juneau	3	0.0	Missoula	1	.....
Kodiak	2	.....	Red Lodge	1	.....
Nome	46	20.5	Thompson Falls	5	.....
Tanana	44	.....	<i>Nebraska</i>		
<i>Arizona</i>			O'Neill	1	.....
Grand Canyon	7	.....	<i>Nevada</i>		
Holbrook	2	.....	Arthur	14	.....
Prescott	3	.....	Austin	6	.....
<i>California</i>			Elko	5	.....
Blue Canyon	23	.....	McGill	2	.....
Huntington Lake	28	.....	Minden	4	.....
Inskip	27	.....	North Fork	7	.....
Macomber	16	.....	<i>New Hampshire</i>		
McCloud	3	.....	Berlin	1	.....
Soda Springs	54	.....	Concord	0	4.0
Squirrel Inn	9	.....	Hanover	T.	.....
Yosemite	3	.....	Pittsburg	12	.....
<i>Colorado</i>			Woodsville	2	.....
Crested Butte	23	.....	<i>New Mexico</i>		
Cumbres	56	.....	Aurora	8	.....
Dillon	5	.....	Chama	30	.....
Durango	8	.....	Gamercio	9	.....
Rico	16	.....	Taos	2	.....
Steamboat Springs	16	.....	Truchas	T.	.....
<i>Idaho</i>			<i>New York</i>		
Big Creek	16	.....	Beaver River	3	.....
Hailey	10	.....	Lowville	2	.....
Idaho City	13	.....	Malone	2	.....
Kellogg	7	.....	Old Forge	9	.....
Ketchum	17	.....	Watertown	1	.....
Kirkham	10	.....	<i>North Dakota</i>		
McCall	27	.....	Bismarck	T.	12.0
Montpelier	4	.....	Williston	T.	14.0
Pierre City	23	.....	<i>Oregon</i>		
Shake Creek	18	.....	Crater Lake	76	.....
Soldier Creek	24	.....	Detroit	4	.....
Spencer	18	.....	Fish Lake	26	.....
Vienna Mine	36	.....	Government Camp	30	.....
<i>Iowa</i>			Imperial Mine	46	.....
Des Moines	0	*	Meacham	28	.....
Sioux City	0	*	Olive Lake	35	.....
<i>Maine</i>			Siskiyou	17	.....
Gardiner	0	3.0	<i>South Dakota</i>		
Greenville	11	16.0	Huron	T.	9.0
Millinocket	6	.....	Pierre	T.	12.0
Van Buren	10	.....	Yankton	T.	†
<i>Massachusetts</i>			<i>Utah</i>		
Amherst	T.	.....	Duchesne	3	.....
Concord	1	.....	Milford	5	.....
Williamstown	T.	.....	Silver Lake	27	.....
<i>Michigan</i>			<i>Vermont</i>		
Bessemer	1	.....	Bellows Falls	1	.....
Elmira	T.	.....	Brattleboro	T.	1.0
Houghton	T.	†	Rutland	2	.....
Sidnaw	1	.....	St. Johnsbury	1	.....
<i>Minnesota</i>			<i>Washington</i>		
Baudette	6	.....	Chesaw	12	.....
Big Falls	7	.....	Paradise Inn	102	.....
Campbell	1	.....	Snoqualmie Pass	60	.....
Collegeville	1	.....	Twisp	26	.....
Duluth	0	*	<i>Wisconsin</i>		
Ely	6	.....	Wausau	0	2.0
Leech Lake Dam	7	.....	<i>Wyoming</i>		
Moorhead	6	10.0	Alta	10	.....
Roseau	8	.....	Dixon	10	.....
Virginia	5	.....	South Pass City	2	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., December 21, 1931



Note.—This bulletin is issued on Wednesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations. Shaded portions represent areas covered with snow. Lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist in high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations. As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, Chief

No. 3

WASHINGTON, D. C., DECEMBER 30, 1931

WINTER 1931-32

CLIMATOLOGICAL DIVISION

OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED DECEMBER 28

The central and eastern portions of the country were visited by no important snow-bringing storms, and only in decidedly small areas did they receive any snow whatever. Part of the upper Mississippi Valley noted a little snow on or about the 24th, and during the latter part of that day and the two days next following there was snowfall in northern and central Michigan and the interior of New York, and also part of New England, but this snowfall was mostly of small quantity. Shortly before the close of the week very little snow fell in some mountain districts of the Virginias.

During several days snowfall occurred in large portions of the northern and western Plateau States and in most of the higher districts in the Rocky Mountain and the Pacific States, and there was widespread and important snowfall late in the week in connection with the eastward movement of a well-developed storm, the center of which crossed the northern parts of California and Nevada, reaching northwestern Utah by the evening of the 28th.

DEPTH OF SNOW ON GROUND

The greater part of Maine, but only small parts of New Hampshire and Vermont, and in New York not quite all of the northern and western portions now have a snow cover, with the greatest depths reported but slightly more than half a foot. A similar situation is noted in the northernmost part of Minnesota. Small parts of Michigan and of North Dakota and some counties near the boundary of Virginia and West Virginia likewise have snow, but of only slight depth. Otherwise, the ground is bare practically everywhere east of the foothills of the Rocky Mountains.

From the vicinity of the Continental Divide westward to the lower slopes of the Sierra Nevada and Cascade Mountains the ground is usually covered with snow, save in the southern portions of New Mexico and Arizona. Considerable depths are reported from some high stations in Colorado and Utah and from many stations in Idaho, while in the Pacific States the depths now measured at the loftier places are the greatest or among the greatest ever noted there during the last very few years.

This week has seen the loss of the snow cover—which was of slight depth only—noted a week ago in the southern parts of New Hampshire and Vermont and from northern Wisconsin and central Minnesota southwestward to western Nebraska. In Michigan the eastern part of the upper peninsula and the northern part of the lower have become covered, as has most of western New York and a small part of the Virginias.

ICE IN RIVERS AND HARBORS

The ice situation shows hardly any change from that found a week ago. The almost complete absence of ice in the Great Lakes, in the chief rivers of the Middle Atlantic States and New England, excepting Maine, and in the Mississippi River and its tributaries, save the Missouri River and some branches to northward of the southern part of South Dakota, continues remarkable and is almost without precedent for the time of year. Ice exceeding a foot in thickness is, however, reported in the Missouri River at one place in North Dakota and in Moosehead Lake, in Maine.

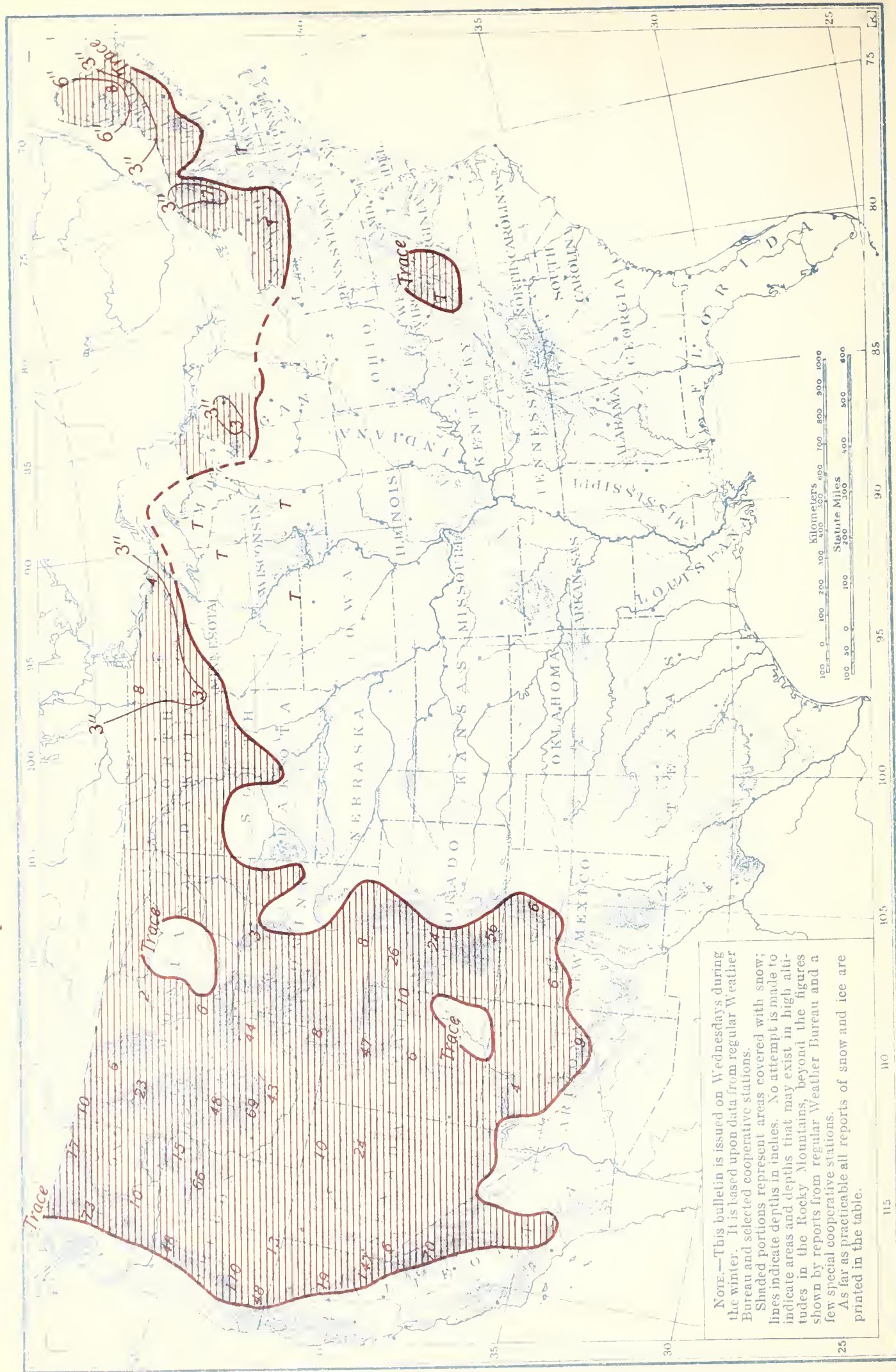
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., DECEMBER 28, 1931

Stations			Stations		
	Snow	Ice in rivers, harbors, etc.		Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Nevada</i>	<i>Inches</i>	<i>Inches</i>
Barrow	7		Arthur	24	
Bethel	14		Austin	7	
Cordova	24		Elko	6	
Eagle	22		Minden	6	
Fairbanks	22	29.0	North Fork	10	
Fort Yukon	16		Reno	1	
Kodiak	2		<i>New Hampshire</i>		
Nome	46	21.5	Berlin	1	
<i>Arizona</i>			Lancaster	2	
Flagstaff	1		Pittsburg	8	
Grand Canyon	4		West Stewartstown	2	
Pinedale	9		<i>New Mexico</i>		
Williams	1		Bluewater	6	
<i>California</i>			Chama	22	
Big Creek	2		Elizabethtown	1	
Hat Creek	3		Santa Fe	2	
Huntington Lake	70		<i>New York</i>		
Macomber	19		Beaver River	4	
Soda Springs	147		Buffalo	T.	*
Squirrel Inn	4		Canton	1	
Yosemite	14		Lake Placid	3	
<i>Colorado</i>			Lowville	2	
Crested Butte	24		Malone	4	
Cumbres	56		Old Forge	7	
Durango	6		Saranac Lake	3	
Rico	18		Watertown	2	
Steamboat Springs	26		<i>North Dakota</i>		
<i>Idaho</i>			Bismarck	T.	12.0
Hailey	43		Williston	T.	16.0
Idaho City	18		<i>Oregon</i>		
Ketchum	48		Austin	38	
McCall	48		Baker	6	
Mackay	15		Crater Lake	110	
Pocatello	2		Government Camp	48	
Porthill	10		Imperial Mine	66	
Shake Creek	44		Lakeview	13	
Soldier Creek	53		Meacham	30	
Spencer	44		Wallowa	15	
Vienna Mine	69		<i>South Dakota</i>		
<i>Maine</i>			Huron	T.	8.5
Farmington	2		Pierre	T.	11.0
Gardiner	T.	4.0	<i>Utah</i>		
Greenville	8	16.0	Cedar City	1	
Millinocket	8		Duchesne	4	
Oldtown	1		Manti	6	
<i>Michigan</i>			Modena	2	
Alpena	3	0.0	Price	8	
East Tawas	2		Silver Lake	47	
Elmira	3		<i>Vermont</i>		
Munising	1		Brattleboro	0	*
Newberry	1		<i>Virginia</i>		
<i>Minnesota</i>			Buchanan	T.	
Baudette	3		Dale Enterprise	T.	
Big Falls	4		<i>Washington</i>		
Campbell	1		Chesaw	17	
Duluth	0	†	Snoqualmie Pass	73	
Ely	4		Twisp	20	
Leech Lake Dam	3		Walla Walla	2	
Moorhead	3	10.0	Yakima	10	
Roseau	8		<i>West Virginia</i>		
Virginia	3		Bayard	T.	
<i>Montana</i>			Hinton	T.	
Bozeman	6		<i>Wisconsin</i>		
Choteau	1		Green Bay	0	*
Dillon	4		Wausau	0	*
Great Falls	2		<i>Wyoming</i>		
Haugan	23		Dixon	8	
Loweth	4		Dome Lake	3	
Missoula	2		Evanston	4	
Red Lodge	1		Foxpark	3	

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable. T. indicates trace.

Depth of Snow on Ground, 8 p. m., December 28, 1931



SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 4

WASHINGTON, D. C., JANUARY 6, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION

OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED JANUARY 4

Many districts between the northern boundary and latitude 41° received snowfall of more than trifling amount during the first five days of the week, chiefly in connection with the easterly movement of the storm which was noted in the preceding issue as centered in northwestern Utah on the evening of December 28. The snowfall over much of the upper Mississippi Valley about the middle of the week was fairly heavy. As the center of the storm approached the Appalachian Mountains a secondary developed off the south Atlantic coast, attaining marked energy as it traveled northeastward to the vicinity of Long Island, then turned eastward. There was considerable snowfall in the easternmost part of the Lake region and over the northern Appalachians, while Vermont, New Hampshire, and western Maine reported notably heavy falls about the 2d.

Late in the week another storm traversed the Southwest, its center following a southerly route, usually near the Mexican border. A large part of the southern Plateau region was visited by snowfall on the 2d and 3d, and later snow fell over much of the central Plains region and the Southwest.

DEPTH OF SNOW ON GROUND

Most of New England and New York now have a snow cover; also there is a scant cover over northern Pennsylvania. Several stations in northern New England and a few in the Adirondacks report depths from slightly less than a foot to several inches more. The upper Mississippi Valley and all of Michigan, save the southern part of the lower peninsula, now have a little snow, while in the Plains region the ground is hardly anywhere bare, except in the southeastern part, and in much of eastern South Dakota and Nebraska the depths are from 6 to 10 inches.

In the Rocky Mountain States and to the westward there is usually a snow cover; the districts that are bare are those along the Pacific coast or the Mexican boundary and several small portions of the important valleys. There is a large amount of snow in the higher portions of several States, especially the Pacific States and the northern Plateau.

There has been a slight southward extension of the snow cover during this week over the central portions of Arizona and New Mexico, but the notable extension of the cover is over the larger part of the Plains region and the upper Mississippi Valley. In northern Pennsylvania, east-central New York, and the central part of New England there has been a moderate southward extension of the snow-covered area. From central Vermont to southwestern Maine the present depths are greater by from 10 inches to a foot than those of a week ago, and part of the northern Plains has similarly received a considerable increase. In portions of the Cascade and the northern Sierra Nevada Mountains somewhat decreased depths are now noted.

ICE IN RIVERS AND HARBORS

Once more comparatively slight changes from the ice situation of the previous week are found, and the almost complete freedom from ice of the harbors of the Great Lakes and the main rivers of the Middle Atlantic States is extraordinary. Floating ice is now noted as far down the Mississippi River as Omaha, Nebr., and the upper Mississippi as Dubuque, Iowa. At Williston, N. Dak., the Missouri River ice has reached the thickness of 18 inches, and in that State generally there has been considerable progress this week in the harvesting of natural ice.

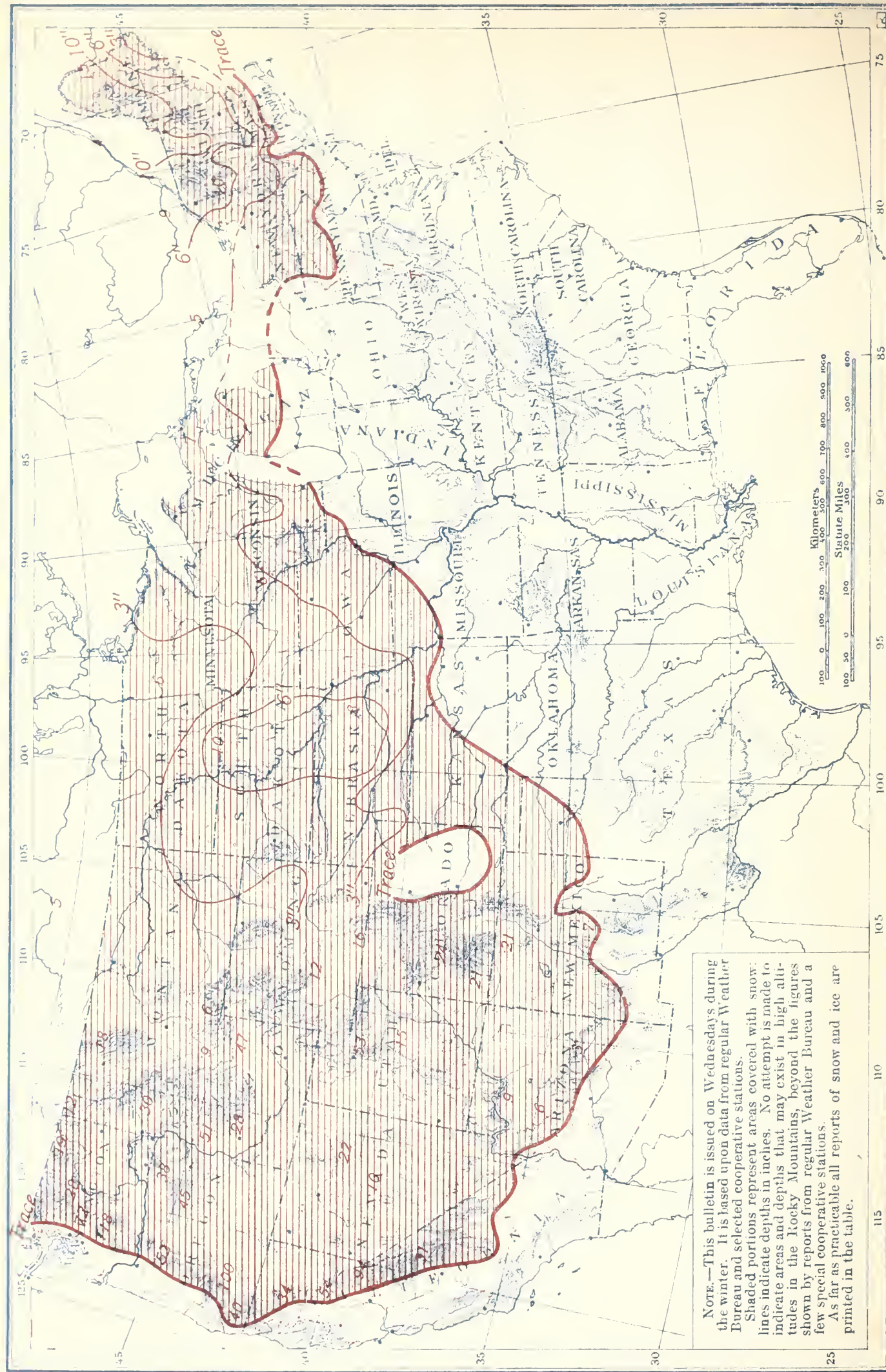
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS. 8 P. M., JANUARY 4, 1932

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Nebraska</i>	<i>Inches</i>	<i>Inches</i>
Fairbanks	22	34.0	Broken Bow	9	.....
Juneau	2	.....	Imperial	8	.....
Tanana	44	.....	Lincoln	4	.....
<i>Arizona</i>			Norfolk	8	.....
Flagstaff	3	.....	Omaha	4	†
Grand Canyon	9	.....	Valentine	4	.....
Prescott	3	.....	<i>Nevada</i>		
<i>California</i>			Arthur	22	.....
Blue Canyon	39	.....	Elko	9	.....
Inskip	54	.....	<i>New Hampshire</i>		
McCloud	34	.....	Berlin	12	.....
Soda Springs	94	.....	Concord	9	0.0
<i>Colorado</i>			Keene	4	.....
Crested Butte	24	.....	Pittsburg	13	.....
Dillon	5	.....	<i>New Mexico</i>		
Rico	21	.....	Aurora	6	.....
<i>Connecticut</i>			Corona	7	.....
West Cornwall	4	.....	<i>New York</i>		
<i>Idaho</i>			Albany	3	†
Big Creek	37	.....	Canton	9	.....
Kellogg	15	.....	Corinth	6	.....
Kirkham	26	.....	Jeffersonville	2	.....
Pierce City	30	.....	Ogdensburg	7	.....
<i>Illinois</i>			Oswego	3	0.0
Freeport	2	.....	Roxbury	6	.....
<i>Iowa</i>			<i>North Dakota</i>		
Carroll	3	.....	Bismarck	4	13.0
Des Moines	1	†	Ellendale	10	.....
Dubuque	1	†	Williston	2	18.0
Estherville	5	.....	<i>Oregon</i>		
Iowa Falls	4	.....	Fish Lake	51	.....
Sioux City	3	†	Imperial Mine	72	.....
<i>Kansas</i>			Olive Lake	45	.....
Garden City	1	.....	Siskiyou	40	.....
Goodland	2	.....	<i>Pennsylvania</i>		
Liberal	4	.....	Freeland	3	.....
<i>Maine</i>			<i>South Dakota</i>		
Gardiner	9	4.0	Huron	7	11.5
Greenville	10	17.0	Pierre	7	11.0
Houlton	15	.....	Yankton	6	*
Millinocket	8	.....	<i>Texas</i>		
Portland	12	0.0	Amarillo	1	.....
<i>Massachusetts</i>			<i>Utah</i>		
Amherst	2	.....	Deseret	3	.....
Concord	3	.....	Provo	4	.....
Holyoke	4	0.0	Salt Lake City	4	.....
Williamstown	8	.....	Watson	12	.....
<i>Michigan</i>			<i>Vermont</i>		
Alpena	2	0.0	Brattleboro	6	2.0
Benzonia	2	.....	Burlington	5	0.0
Elmira	5	.....	Northfield	10	.....
Houghton	2	*	<i>Washington</i>		
Iron Mountain	4	.....	Paradise Inn	118	.....
Mount Pleasant	2	.....	Spokane	4	.....
Sidnaw	2	.....	Twisp	28	.....
<i>Minnesota</i>			Yakima	14	.....
Duluth	T.	†	<i>West Virginia</i>		
Grand Meadow	4	.....	Bayard	1	.....
Moorhead	2	10.0	<i>Wisconsin</i>		
St. Paul	3	*	Ashland	6	.....
Thief River Falls	6	.....	Green Bay	4	1.0
Worthington	5	.....	La Crosse	2	†
<i>Missouri</i>			Medford	3	.....
St. Joseph	3	.....	Park Falls	4	.....
<i>Montana</i>			Wausau	2	4.5
Belton	18	.....	<i>Wyoming</i>		
Dillon	9	.....	Casper	5	.....
Kalispell	14	.....	Foxpark	14	.....
Miles City	4	.....	South Pass City	12	.....
Thompson Falls	8	.....	Yellowstone Park	15	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

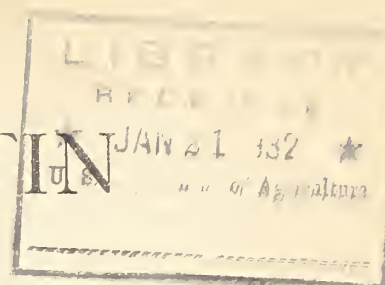
Depth of Snow on Ground, 8 p. m., January 4, 1932



SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, Chief



No. 5

WASHINGTON, D. C., JANUARY 13, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION

OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED JANUARY 11

The storm noted in last week's bulletin as causing snowfall over much of the southern Plateau and the Plains region took a course from Texas northeastward, crossing the upper Lake region into northeastern Canada and causing further snowfall from the central Plains to the vicinity of western Lake Superior, notably heavy snow occurring in western and northern Iowa and southeastern Minnesota. From the 8th to 11th another storm moved from the eastern Gulf of Mexico to near Newfoundland, bringing snow to the vicinity of the coast from Chesapeake Bay northeastward, especially to Long Island and southeastern New England.

The latter half of the week saw light to moderate snow on several days in parts of the Lake region, and near the end there was some snowfall in the northern Plateau region, Wyoming, and southern Montana.

Warm weather and rains about the middle of the week removed much or all of the snow cover noted in the preceding issue as extending over most of New England, New York, and northern Pennsylvania.

DEPTH OF SNOW ON GROUND

Nearly all of New England and most of the eastern part of the Middle Atlantic States have snow on the ground, but there are only slight depths in the latter, while New England seldom has more than half a foot, except the northern and western portions of Maine. The Adirondack region, western New York, and lower Michigan usually have a little snow; while from upper Michigan southwestward to western Kansas there is now fairly deep snow on the ground. North Dakota, the western portions of South Dakota and Nebraska, and the eastern parts of Montana and Wyoming are usually lightly covered, while central Montana and eastern Colorado are mainly bare. In the far West there is still comparatively little bare ground.

The southern limit of snow is in about the same position as last week, except in the northeasternmost part of the country where the central portions of Pennsylvania and New York have lost their snow, while a comparatively narrow strip just to the southeastward has gained a cover. There was a decrease of many inches in the snow depths over northern New York and interior New England; likewise in several parts of the far West, particularly the higher regions of the Pacific States. The one section where there was a marked gain in the snow depth includes the middle Missouri and upper Mississippi Valleys and upper Michigan.

ICE IN RIVERS AND HARBORS

Temperatures in the majority of northern districts were much above normal during the week, especially in the Lake region, and there was not much change in the ice situation, the amount nearly everywhere being remarkably little for January. As a rule, there is slightly more ice than a week ago in New England, Wisconsin, Iowa, and the Dakotas. In all save a few of the harbors of the Great Lakes the ice continues negligible, while the western shore of Lake Huron and the southern of Lake Erie are practically without any ice.

In Wisconsin the ice in rivers and small lakes is too thin for cutting, and the same holds for parts of North Dakota, though elsewhere in that State some has been cut. In Utah the ice has reached good thickness and much has been harvested.

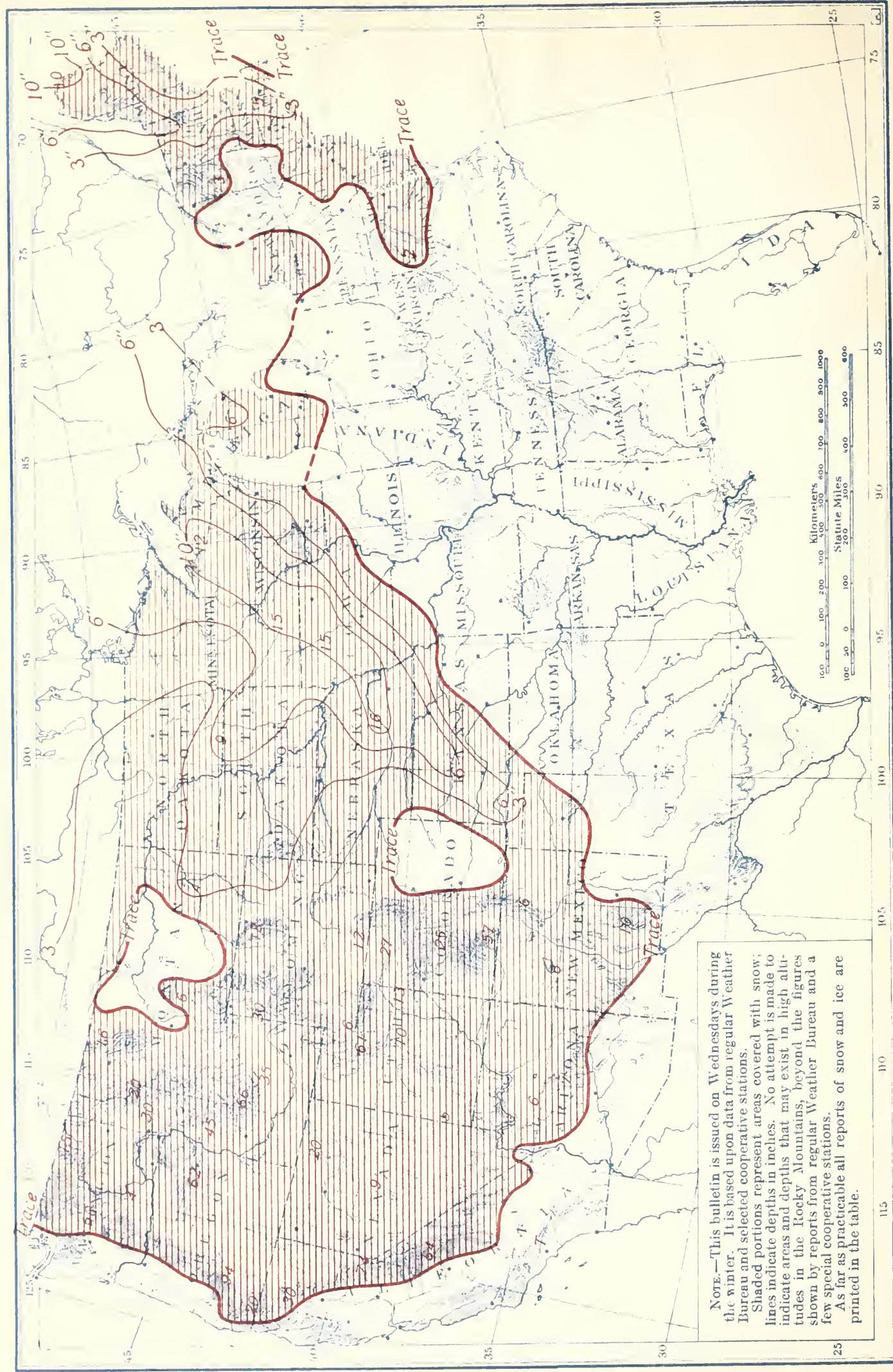
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., JANUARY 11, 1932

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Arizona</i>	<i>Inches</i>	<i>Inches</i>	<i>Nebraska</i>	<i>Inches</i>	
Flagstaff.....	2		Auburn.....	6	
Pinedale.....	5		Grand Island.....	16	
Williams.....	6		Norfolk.....	8	
<i>California</i>			Omaha.....	10	2
Blue Canyon.....	33		Red Cloud.....	9	
Huntington Lake.....	64		<i>Nevada</i>		
McCloud.....	30		Austin.....	9	
Sierraville.....	5		North Fork.....	20	
Soda Springs.....	74		<i>New Hampshire</i>		
<i>Colorado</i>			Concord.....	3	3.0
Cumbres.....	57		Pittsburg.....	10	
Steamboat Springs.....	27		<i>New Jersey</i>		
<i>Connecticut</i>			Atlantic City.....	T.	
New Haven.....	T.	0.0	Elizabeth.....	T.	
West Cornwall.....	2		Lakewood.....	T.	
<i>Delaware</i>			<i>New Mexico</i>		
Millsboro.....	T.		Bluewater.....	6	
<i>Idaho</i>			Chama.....	21	
Hailey.....	28		Cloudcroft.....	10	
Ketchum.....	33		Santa Fe.....	6	
McCall.....	45		Taos.....	4	
Mascot Mine.....	35		<i>New York</i>		
Pocatello.....	7		Albany.....	0	†
Vienna Mine.....	66		Beaver River.....	3	
<i>Iowa</i>			Buffalo.....	1	*
Atlantic.....	10		Fredonia.....	1	
Charles City.....	6		Warwick.....	2	
Des Moines.....	5	2.0	<i>North Dakota</i>		
Pocahontas.....	15		Bismarck.....	4	13.5
Sioux City.....	8	†	Ellendale.....	9	
Waterloo.....	10		Williston.....	1	21.5
<i>Kansas</i>			<i>Oregon</i>		
Dodge City.....	3		Baker.....	5	
Garden City.....	4		Crater Lake.....	94	
Phillipsburg.....	7		Meacham.....	30	
Wakeeney.....	8		Wallowa.....	10	
<i>Maine</i>			<i>Rhode Island</i>		
Farmington.....	4		Kingston.....	6	
Gardiner.....	T.	5.0	Providence.....	5	0.0
Greenville.....	8	20.0	<i>South Dakota</i>		
Van Buren.....	10		Huron.....	7	14.0
<i>Massachusetts</i>			Pierre.....	5	15.0
Boston.....	4	0.0	Rapid City.....	3	
Holyoke.....	2	4.0	Yankton.....	4	2
<i>Michigan</i>			<i>Utah</i>		
Alpena.....	3	0.0	Duchesne.....	4	
Bessemer.....	12		Modena.....	5	
Escanaba.....	5	0.0	Price.....	10	
Grayling.....	3		Salt Lake City.....	4	
Houghton.....	5	1.0	Silver Lake.....	51	
Iron River.....	8		<i>Vermont</i>		
Munising.....	8		Brattleboro.....	T.	2.5
Newberry.....	8		White River Junction.....	3	
<i>Minnesota</i>			<i>Virginia</i>		
Baudette.....	4		Culpeper.....	T.	
Duluth.....	7	†	Dale Enterprise.....	2	
Mankato.....	15		<i>Washington</i>		
Moorhead.....	2	14.5	Chesaw.....	15	
Roseau.....	8		Snoqualmie Pass.....	50	
St. Paul.....	10	0.0	<i>Wisconsin</i>		
Virginia.....	6		Fond du Lac.....	2	
<i>Missouri</i>			Green Bay.....	2	2.5
Maryville.....	4		La Crosse.....	6	†
Unionville.....	T.		Stevens Point.....	6	
<i>Montana</i>			Wausau.....	8	8.0
Bozeman.....	6		<i>Wyoming</i>		
Haugan.....	20		Alta.....	30	
Kalispell.....	8		Dixon.....	10	
Loweth.....	6		Dome Lake.....	18	
Red Lodge.....	3		Yellowstone Park.....	18	

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable. T. indicates trace.

Depth of Snow on Ground, 8 p. m., January 11, 1932



NOTE.—This bulletin is issued on Wednesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations. Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist in high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations. As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 6

WASHINGTON, D. C., JANUARY 20, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED JANUARY 18

In many northern districts from the Cascade Mountains eastward to the Dakotas snow fell on several days, especially during the first half of the week. About the 13th and 14th considerable snowfall occurred in the middle Plateau region and northern New Mexico, in connection with low pressure near the Mexican border, and on the 14th and 15th snow fell from the central parts of Kansas and Nebraska northeastward to the upper Lakes, as an offshoot storm traveled rapidly from Missouri to the St. Lawrence Valley. At this time practically all precipitation in the United States to the eastward of Lake Michigan came as rain, owing to unseasonable warmth prevailing.

Even before this storm center approached, most of the snow in the eastern Middle Atlantic States and New England had been removed by high temperatures. However, after the storm had passed, cold weather reached New York and New England; then, near the end of the week, another storm arrived from the West, after causing little precipitation to westward of the Lakes, and brought light to moderate snowfall to most of Maine and some northern portions of New Hampshire, Vermont, and New York.

DEPTH OF SNOW ON GROUND

In the far West snow continues to cover most of the ground, though in southern and eastern New Mexico less is covered than a week ago. Over the greater part of the northern and middle Plains and the upper Mississippi Valley there is snow, the depths exceeding a foot in northwestern Iowa and parts of the States adjoining. The northwestern part of the Lake region has a snow cover which hardly anywhere exceeds half a foot; elsewhere east of the Mississippi River the snow is nowhere more than 4 inches deep, as far as reported, and is practically confined to the Adirondacks, Maine, New Hampshire, and central and northern Vermont.

Snow has disappeared from western New York; also from the strip extending from northern Virginia to Massachusetts which last week was lightly covered. From southern Wisconsin to the Texas Panhandle a comparatively narrow strip has been uncovered, the edge of the snow area having receded slightly to the northwest.

Within the area still covered the depths are less from northern Wisconsin to central Iowa, and usually in central Kansas and southern Nebraska. Increased depths are the rule from northeastern Nebraska northward over the valley of the Red River of the North, and again in much of Montana and Wyoming east of the Rocky Mountains. Nearly all high portions of the Western States show increases, and this is notably true in the Pacific States; at some places gains in depth are more than 20 inches, and several high stations now report amounts from 6 feet to almost 10 feet.

ICE IN RIVERS AND HARBORS

The ice situation shows but little change from that noted in last week's BULLETIN, the amounts reported from the 95th meridian eastward being astonishingly small for mid-January. As a rule, those points in western New England, New York, Wisconsin, and along the Mississippi River between St. Louis and Davenport which had ice last week have either lost the ice or note decreased thickness. In the Dakotas, however, there is now more ice. Thicknesses from 20 inches to almost 2 feet are reported in the Missouri River at Williston, N. Dak., and in Moosehead Lake, at Greenville, Me.

H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., JANUARY 18, 1932

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Montana</i>	<i>Inches</i>	<i>Inches</i>
Cordova	37	.....	Billings	5	.....
Eagle	16	.....	Browning	4	.....
Fairbanks	25	41.0	Kalispell	12	.....
Nome	55	31.0	Miles City	7	.....
St. Paul Island	17	.....	Thompson Falls	5	.....
<i>Arizona</i>			<i>Nebraska</i>		
Flagstaff	8	.....	Lincoln	6	.....
Grand Canyon	18	.....	Norfolk	15	.....
Pinedale	16	.....	Omaha	10	?
Prescott	5	.....	O'Neill	7	.....
<i>California</i>			<i>Nevada</i>		
Big Creek	10	.....	Elko	10	.....
Blue Canyon	57	.....	Minden	6	.....
Huntington Lake	84	.....	Winnemucca	1	.....
Mount Wilson	6	.....	<i>New Hampshire</i>		
Soda Springs	110	.....	Concord	T.	5.0
Squirrel Inn	18	.....	Hanover	2	.....
Yosemite	28	.....	Pittsburg	4	.....
<i>Colorado</i>			Woodsville	2	.....
Crested Butte	36	.....	<i>New Mexico</i>		
Cumbres	87	.....	Bluewater	6	.....
Denver	1	.....	Corona	3	.....
Durango	10	.....	Elizabethtown	7	.....
Rico	29	.....	Gamero	9	.....
<i>Idaho</i>			Santa Fe	4	.....
Big Creek	35	.....	<i>New York</i>		
Kirkham	26	.....	Beaver River	4	.....
McCall	45	.....	Lake Placid	3	.....
Pierce City	40	.....	<i>North Dakota</i>		
Pocatello	5	.....	Bismarck	4	16.0
Shake Creek	42	.....	Ellendale	14	.....
Spencer	37	.....	Williston	6	23.0
<i>Iowa</i>			<i>Oregon</i>		
Carroll	10	.....	Baker	9	.....
Des Moines	1	2.0	Crater Lake	114	.....
Dubuque	T.	†	Detroit	13	.....
Esterville	11	.....	Government Camp	57	.....
Iowa Falls	11	.....	Imperial Mine	70	.....
Pocahontas	19	.....	Siskiyou	28	.....
Sioux City	10	*†	<i>South Dakota</i>		
<i>Kansas</i>			Pierre	3	17.0
Concordia	2	.....	Yankton	6	11.0
Garden City	2	.....	<i>Utah</i>		
Larned	2	.....	Cedar City	8	.....
Liberal	2	.....	Manti	7	.....
<i>Maine</i>			Ogden	10	.....
Gardiner	3	†	Salt Lake City	7	.....
Greenville	4	22.0	Silver Lake	57	.....
Houlton	2	.....	<i>Vermont</i>		
Millinocket	3	.....	Bellows Falls	1	.....
Oldtown	1	.....	Northfield	2	.....
<i>Michigan</i>			St. Johnsbury	2	.....
Bessemer	3	.....	<i>Washington</i>		
East Jordan	2	.....	Snoqualmie Pass	77	.....
Elmira	2	.....	Twisp	30	.....
Escanaba	2	0.0	Yakima	7	.....
Houghton	6	2.0	<i>Wisconsin</i>		
Iron Mountain	4	.....	Ashland	7	.....
Sault Ste. Marie	2	0.0	Eau Claire	9	.....
Sidnaw	3	.....	Green Bay	2	1.0
<i>Minnesota</i>			La Crosse	4	1.0
Big Falls	5	.....	Rhineland	5	.....
Collegeville	8	.....	Wausau	5	3.5
Duluth	4	†	<i>Wyoming</i>		
Ely	4	.....	Casper	4	.....
Minneapolis	7	.....	Lander	7	.....
Montevideo	12	.....	Newcastle	6	.....
Moorhead	5	16.0	Sheridan	6	.....
St. Paul	9	*	South Pass City	25	.....
Worthington	14	.....	Yellowstone Park	18	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

NOTE.—This bulletin is issued on Wednesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.

Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist in high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

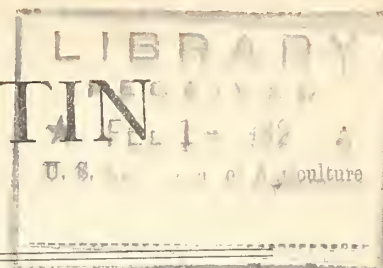
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As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief



No. 7

WASHINGTON, D. C., JANUARY 27, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED JANUARY 25

In many northwestern districts snowfall of moderate amount occurred during the first half of the week, but scarcely any came during the latter part. The Lake region and districts to eastward noted light snowfall over considerable areas during the middle and latter parts of the week, in connection with low-pressure areas which were of no marked intensity. Mild weather for January continued in the central and eastern portions of the country, and there was much melting of snow in the middle Missouri Valley. However, just before the end of the week snow fell in the central Plains, chiefly to southward of the area which was heavily covered at the beginning of the week. In Arizona and California some snow melted at moderate elevations, and the depths usually are now less at the higher places from which reports are secured, though this decrease in depth has probably been accompanied by little loss of water content.

DEPTH OF SNOW ON GROUND

There has been comparatively little change in the general snow situation during the week. In the western half of the country the cover is more extensive than usual in January, while from the vicinity of the Mississippi River eastward there is a remarkably small area for the time of year now showing snow, and that area is comparatively near to the northern boundary and has usually but a shallow cover.

A decidedly light cover of snow is now noted over much of central and western New York, in a portion of northwestern Illinois, and in central Kansas where last week the ground was bare. On the other hand, some ground has become bare in northeastern Montana, southwestern Nebraska, and a few other districts.

Decreased depths are now reported from the middle Missouri Valley and from the majority of reporting stations in Arizona, Utah, and western Colorado, while most stations in the elevated portions of California and some in westernmost Oregon, likewise, have somewhat less depths. However, near the Cascade crest and to eastward as far as the Continental Divide there are greater depths, as a rule, than a week ago. In most portions of the far West the supply of stored snow is now larger than usual at this date. In northern Minnesota and the interior of Maine snow depths are now, for the most part, a few inches greater than a week ago.

ICE IN RIVERS AND HARBORS

The amounts of ice measured on the 25th are substantially the same as those noted a week earlier. The Missouri River is indicated as free throughout the lower portion, but has a little ice in the section which forms the eastern boundary of Nebraska, while in the Dakotas there is now, as for several weeks hitherto, considerable ice in both the Missouri and its tributaries and in the Red River of the North. A small amount of ice is to be found in the upper Mississippi River and in most harbors in the northwestern portion of the upper Lake region. The Kennebec and Merrimac Rivers in New England are partly frozen.

Reports indicate that in the Plateau States the harvesting of natural ice has made marked progress, with no dissatisfaction as to thickness. In northeastern Wyoming and many counties of North Dakota and Minnesota ice has been partly put away, though it is often thinner than the cutters desire to harvest, especially in Minnesota. There has been a little cutting in northern New England. In the Lower Peninsula of Michigan, however, advices say practically no natural ice has yet been cut.

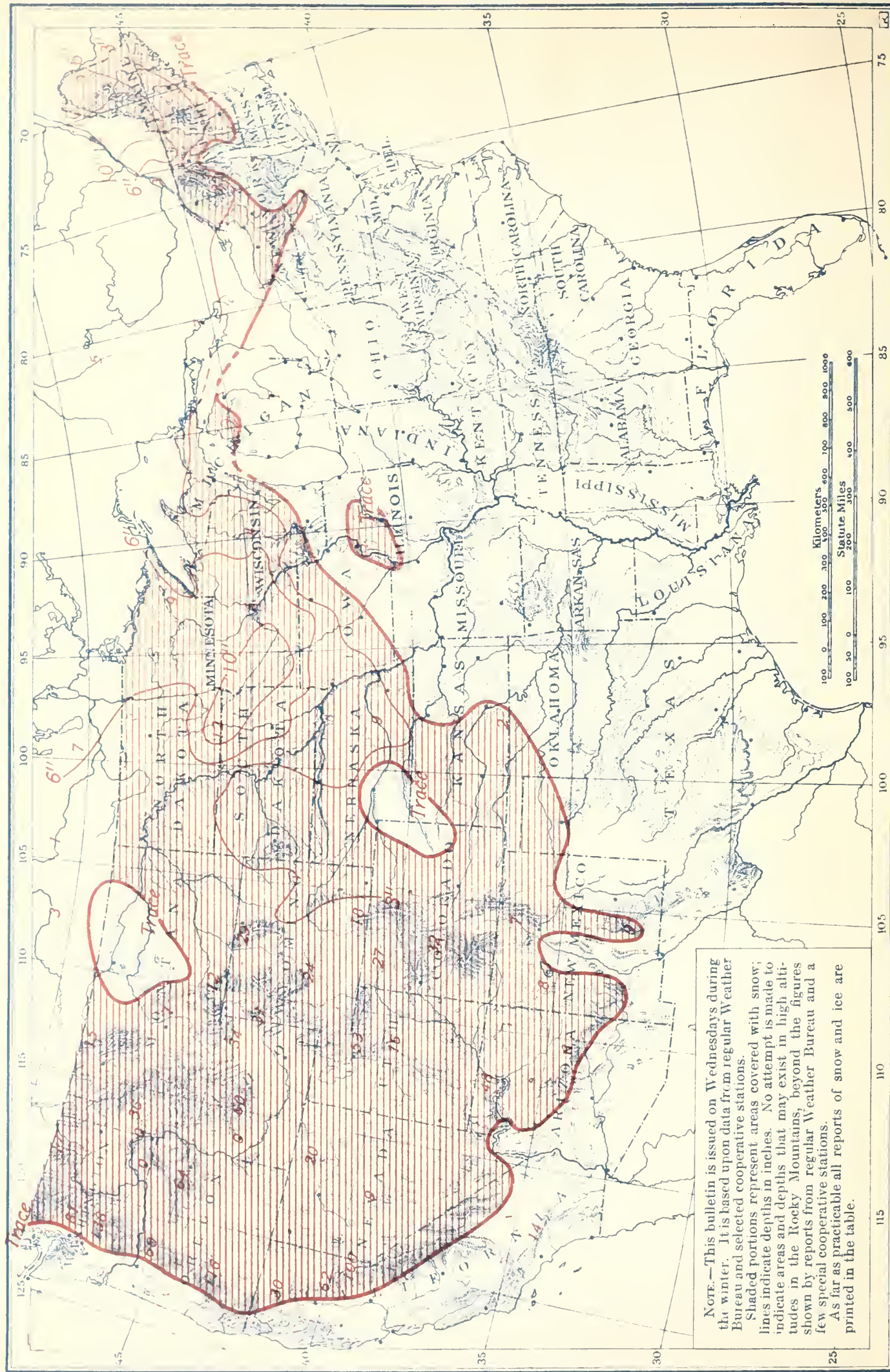
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., JANUARY 25, 1932

Stations	Snow Inches	Ice in rivers, har- bors, etc. Inches	Stations	Snow Inches	Ice in rivers, har- bors, etc. Inches
<i>Alaska</i>			<i>Nebraska</i>		
Fairbanks	27	41.0	Broken Bow	6	
Nome	44	33.0	Grand Island	9	
Tanana	45		Norfolk	8	
<i>Arizona</i>			<i>Nevada</i>		
Bright Angel	48		Arthur	10	
Flagstaff	5		Austin	9	
Pinedale	6		North Fork	20	
Williams	5		<i>New Hampshire</i>		
<i>California</i>			Berlin	2	
Blue Canyon	50		Pittsburg	11	
Inskip	62		<i>New Mexico</i>		
McCloud	30		Aurora	1	
Macomber	32		Bluewater	8	
Mount Wilson	3		Cloudcroft	9	
Soda Springs	100		Santa Fe	3	
<i>Colorado</i>			Taos	7	
Crested Butte	32		<i>New York</i>		
Dillon	9		Canton	3	
Pueblo	1	0.0	Herkimer	1	
Rico	26		Lake Placid	4	
Steamboat Springs	27		Malone	4	
<i>Idaho</i>			Old Forge	7	
Hailey	24		Oswego	2	0.0
Idaho City	30		Watertown	4	
Ketchum	34		<i>North Dakota</i>		
Montpelier	16		Bismarck	5	17.0
Pocatello	9		Williston	5	23.0
Soldier Creek	40		<i>Oregon</i>		
Vienna Mine	60		Baker	11	
<i>Illinois</i>			Crater Lake	116	
La Salle	T.		Fish Lake	54	
<i>Iowa</i>			Meacham	44	
Atlantic	2		Olive Lake	60	
Des Moines	T.	6.0	Siskiyou	9	
Forest City	6		Wallowa	10	
Iowa Falls	6		<i>South Dakota</i>		
Sioux City	5	*†	Huron	7	16.0
<i>Kansas</i>			Pierre	2	18.0
Dodge City	1		Yankton	3	12.5
Liberal	1		<i>Texas</i>		
Medicine Lodge	2		Amarillo	T.	
Phillipsburg	3		<i>Utah</i>		
Wichita	1	0.0	Duchesne	10	
<i>Maine</i>			Logan	17	
Farmington	4		Modena	6	
Gardiner	6	†	Silver Lake	53	
Greenville	10	22.0	<i>Vermont</i>		
Van Buren	7		Burlington	2	0.0
<i>Michigan</i>			Enosburg Falls	9	
Bessemer	4		White River Junction	1	
Escanaba	2	*	<i>Washington</i>		
Houghton	4	3.0	Chesaw	17	
Iron Mountain	4		Paradise Inn	138	
Iron River	2		Snoqualmie Pass	81	
Mackinaw	1		Twisp	18	
Sault Ste. Marie	3	*	<i>Wisconsin</i>		
<i>Minnesota</i>			Eau Claire	8	
Baudette	8		Green Bay	1	2.0
Duluth	2	9.5	Medford	5	
Fort Ripley	7		Park Falls	6	
Grand Meadow	9		Stevens Point	9	
Mankato	12		Wausau	4	7.0
Moorhead	5	17.0	<i>Wyoming</i>		
St. Paul	5	*	Alta	31	
Virginia	9		Dixon	18	
<i>Montana</i>			Dome Lake	29	
Haugan	20		Foxpark	18	
Kalispell	12		Lander	9	
Miles City	7		South Pass City	24	
Red Lodge	12		Yellowstone Park	18	

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. Indicates trace.

Depth of Snow on Ground, 8 p. m., January 25, 1932



SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

U. S. DEPARTMENT OF AGRICULTURE

No. 8

WASHINGTON, D. C., FEBRUARY 3, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED FEBRUARY 1

On practically every day of the week snow occurred in considerable portions of the Plateau region and the North Pacific States, the falls of the 30th and 31st being especially important and extending in several counties quite down to sea level. In the eastern half of the country some snow occurred about the 27th in northern New York and New England, but the most important snowfall came the 29th to 31st from Minnesota and eastern Nebraska eastward to Maine in connection with the northeastward movement from the central Plains region of an unusually vigorous storm. A marked fall in temperature succeeded this storm, bringing to most central and eastern districts the first weather appreciably colder than normal since the second week in December. The week closed with somewhat more moderate temperatures and snowfall in much of the upper Lake region and from central Indiana to western New York, the amounts usually being small.

DEPTH OF SNOW ON GROUND

Increased depths are now reported from substantially all places in the Pacific States, except those where snow is of rare occurrence. At some of the lofty stations the measures are from 6 up to 14 feet, and in the mountains of the Plateau States and Colorado depths are mainly less, but still unusually great for the localities reporting, so that the prospects are decidedly favorable for ample streamflow next summer in the snow-fed rivers.

The amount of snow has decreased during the week in parts of Minnesota, northeastern New York, and northern New England. On the other hand, from Nebraska and north-central Kansas eastward to Michigan, the southern shore of Lake Erie, and western New York there has been an increase in the depth, yet this gain in snow has generally been but moderate.

The snow-covered area at this time is not very different from that a week ago, except in western New York and northwestern Pennsylvania, lower Michigan, and the northern portions of Ohio and Indiana, which have gained a cover; and in eastern Colorado, the Texas Panhandle, and some adjacent areas, which had a light cover last week, but have now become bare. Depths exceeding half a foot, though only in a very few places as great as 1 foot, are now to be found in the northern portions of New England and Michigan, almost throughout Minnesota, northern Iowa, and northeastern Nebraska, in much of western Wisconsin, and in the eastern parts of the Dakotas.

ICE IN RIVERS AND HARBORS

The arrival of cold weather in most northern States caused an increase in ice thickness at practically all places where it was present a week ago, and reappearance at almost every ice-reporting station which had noted ice at any time before this season, save that in New England and eastern New York several rivers continued without ice, including practically all important parts of the Hudson River system and many of the Connecticut. From Michigan to the Dakotas the increases in thickness were usually from 2 to 6 inches. There is now a little ice in most Lake Erie harbors, in the upper Mississippi River as far down as Hannibal, Mo., and in the Missouri to Kansas City, and also in the Snake River at Lewiston, Idaho.

The cutting and storing of ice is being pushed in North Dakota, Minnesota, and Wisconsin, but in lower Michigan hardly any cutters have yet started.

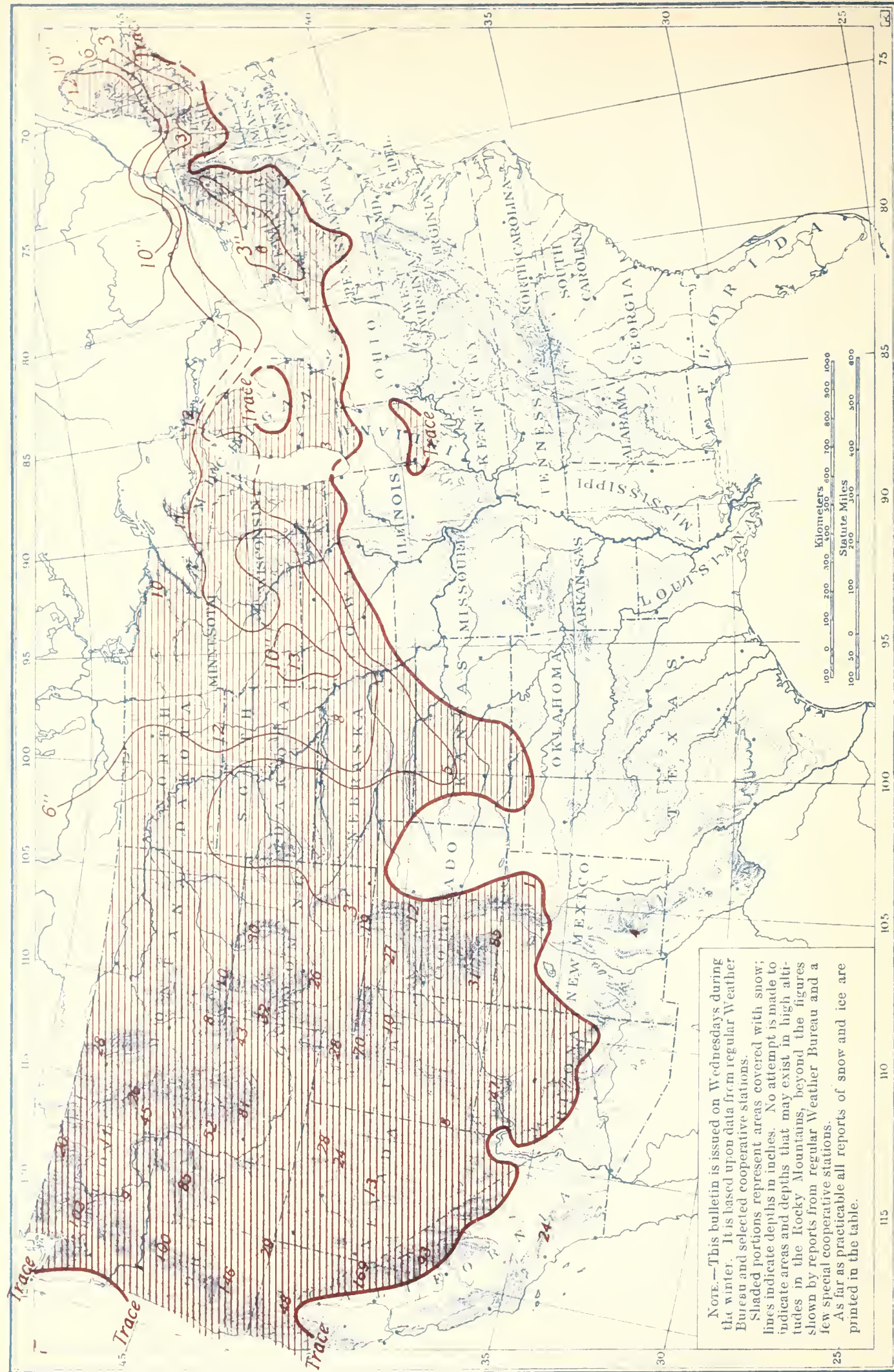
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 1, 1932

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Arizona</i>	<i>Inches</i>	<i>Inches</i>	<i>Nevada</i>	<i>Inches</i>	<i>Inches</i>
Bright Angel	47	.....	Austin	13	.....
Grand Canyon	9	.....	Elko	24	.....
Pinedale	16	.....	North Fork	28	.....
<i>California</i>			Reno	6	.....
Big Creek	39	.....	Winnemucca	9	.....
Eureka	T.	.....	<i>New Hampshire</i>		
Huntington Lake	93	.....	Berlin	2	.....
Sierraville	33	.....	Concord	0	5.0
Soda Springs	169	.....	Lancaster	4	.....
Yosemite	42	.....	<i>New Mexico</i>		
<i>Colorado</i>			Cloudcroft	4	.....
Cumbres	85	.....	Des Moines	1	.....
Dillon	12	.....	<i>New York</i>		
Steamboat Springs	27	.....	Alfred	2	.....
<i>Idaho</i>			Beaver River	7	.....
Big Creek	33	.....	Buffalo	T.	*
Kellogg	16	.....	Jamestown	3	.....
Kirkham	42	.....	Oswego	5	†
Lewiston	4	*†	Saranac Lake	2	.....
Mascot Mine	60	.....	<i>North Dakota</i>		
Pocatello	8	.....	Bismarck	4	17.5
Shake Creek	41	.....	Ellendale	12	.....
Vienna Mine	81	.....	Williston	5	26.0
<i>Iowa</i>			<i>Ohio</i>		
Des Moines	1	2.0	Cleveland	T.	*
Dubuque	T.	*†	Sandusky	T.	2.0
Forest City	8	.....	<i>Oregon</i>		
Pocahontas	16	.....	Austin	53	.....
Sioux City	6	*†	Baker	14	.....
<i>Kansas</i>			Crater Lake	146	.....
Concordia	1	.....	Government Camp	100	.....
Larned	1	.....	Imperial Mine	85	.....
McPherson	1	.....	Portland	1	.....
Wakeeney	5	.....	Siskiyou	41	.....
<i>Maine</i>			Welches	30	.....
Gardiner	5	7.0	<i>Pennsylvania</i>		
Greenville	11	23.0	Emporium	T.	.....
Houlton	9	.....	Erie	T.	*
Millinocket	10	.....	State College	T.	.....
Van Buren	12	.....	<i>South Dakota</i>		
<i>Michigan</i>			Huron	8	17.5
Alpena	T.	4.0	Pierre	1	20.0
Battle Creek	1	.....	Yankton	4	16.0
Benzonia	4	.....	<i>Utah</i>		
East Jordan	6	.....	Manti	8	.....
Escanaba	4	4.0	Modena	8	.....
Houghton	11	6.0	Provo	12	.....
Munising	8	.....	Salt Lake City	7	.....
Port Huron	T.	2.0	Tooele	13	.....
Sault Ste. Marie	12	1.5	<i>Vermont</i>		
Sidnaw	5	.....	Brattleboro	0	†
<i>Minnesota</i>			Enosburg Falls	2	.....
Big Falls	8	.....	St. Johnsbury	3	.....
Duluth	4	12.0	<i>Washington</i>		
Ely	10	.....	Seattle	2	0.0
Minneapolis	5	.....	Snoqualmie Pass	103	.....
Moorhead	4	18.0	Spokane	11	.....
Roseau	8	.....	Twisp	29	.....
St. Paul	4	6.0	Yakima	9	.....
Worthington	13	.....	<i>Wisconsin</i>		
<i>Montana</i>			Ashland	6	.....
Belton	28	.....	Green Bay	2	7.0
Bozeman	8	.....	La Crosse	6	4.0
Philipsburg	2	.....	Rhineland	4	.....
Thompson Falls	8	.....	Wausau	7	9.0
<i>Nebraska</i>			<i>Wyoming</i>		
Broken Bow	7	.....	Casper	3	.....
McCook	2	.....	Evanston	17	.....
Omaha	6	‡	Newcastle	5	.....
O'Neill	8	.....	Yellowstone Park	28	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., February 1, 1932



SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, Chief

No. 9

WASHINGTON, D. C., FEBRUARY 10, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION

OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED FEBRUARY 8

Most districts from the upper Mississippi Valley and upper Lake region eastward received snowfall during the first half of the week, but none of consequence fell in any part of the Ohio River watershed or to southward of central Pennsylvania. Nearly all parts of New England were visited by heavy snowfall on the 4th and 5th in connection with the movement northeastward of a well-developed storm whose center was over the ocean from east of New Jersey to the vicinity of Nova Scotia. There was some snowfall during this period in the middle Plateau area and other parts of the far West. The latter half of the week brought some snowfall to northern districts from eastern Montana to Lake Huron and in northeastern New York and northern New England. As a rule, temperatures in the East were not so much above normal as they had been during the weeks preceding, but in the western half of the country, especially in the Rocky Mountain and Plains States, the weather this week was not so cold as it usually has been since the year began.

DEPTH OF SNOW ON GROUND

Increased amounts of snow are now reported from New England and eastern New York—practically all portions of Maine, New Hampshire, central Massachusetts, and the Adirondack region of New York now having more than 6 inches, while a few stations measure more than 15 inches. Usually there has been an increase in amount in Michigan, Wisconsin, northern and southeastern Minnesota, and at elevated stations from Colorado northward and northwestward to Montana and Idaho. Decreased depths are indicated in western New York, in the middle Plains and western and northern Iowa, and at nearly all stations in the Pacific and middle and southern Plateau States.

Almost all of New England and eastern New York that was bare a week ago now has a snow cover; likewise much of northern Illinois and southeastern Iowa. On the other hand, parts of Montana and western Nebraska have lost the snow cover present last week, and most of central and western Kansas and northern Pennsylvania have become bare. The southern Middle Atlantic States and the Ohio Valley continue without important snow to a surprising extent, but in the Plains States and the States next west of the Mississippi River the situation is not far from an average midwinter condition; while in the far West, in spite of some decrease recently in the covered area, there is now a greater amount of ground covered than usual, and particularly the amounts of stored snow at the higher elevations are comparatively large.

ICE IN RIVERS AND HARBORS

There is now a little more ice in New England and New York than a week ago, yet in the latter hardly any has yet been cut for storage. The Great Lakes show practically no change during the week; of the harbors of Lakes Erie and Ontario a number have now no ice and none have much. In Wisconsin, Iowa, and South Dakota there usually has been a marked increase in the thickness of the ice, some stations noting gains of 4 to 8 inches, but the lower limits of ice in the Missouri and Mississippi Rivers are about where they were a week ago.

In Wisconsin, Minnesota, and Iowa the harvesting of ice has made considerable progress during the week, but some complaints of poor quality are reported from Iowa. There has been a little harvesting in lower Michigan and in Nebraska.

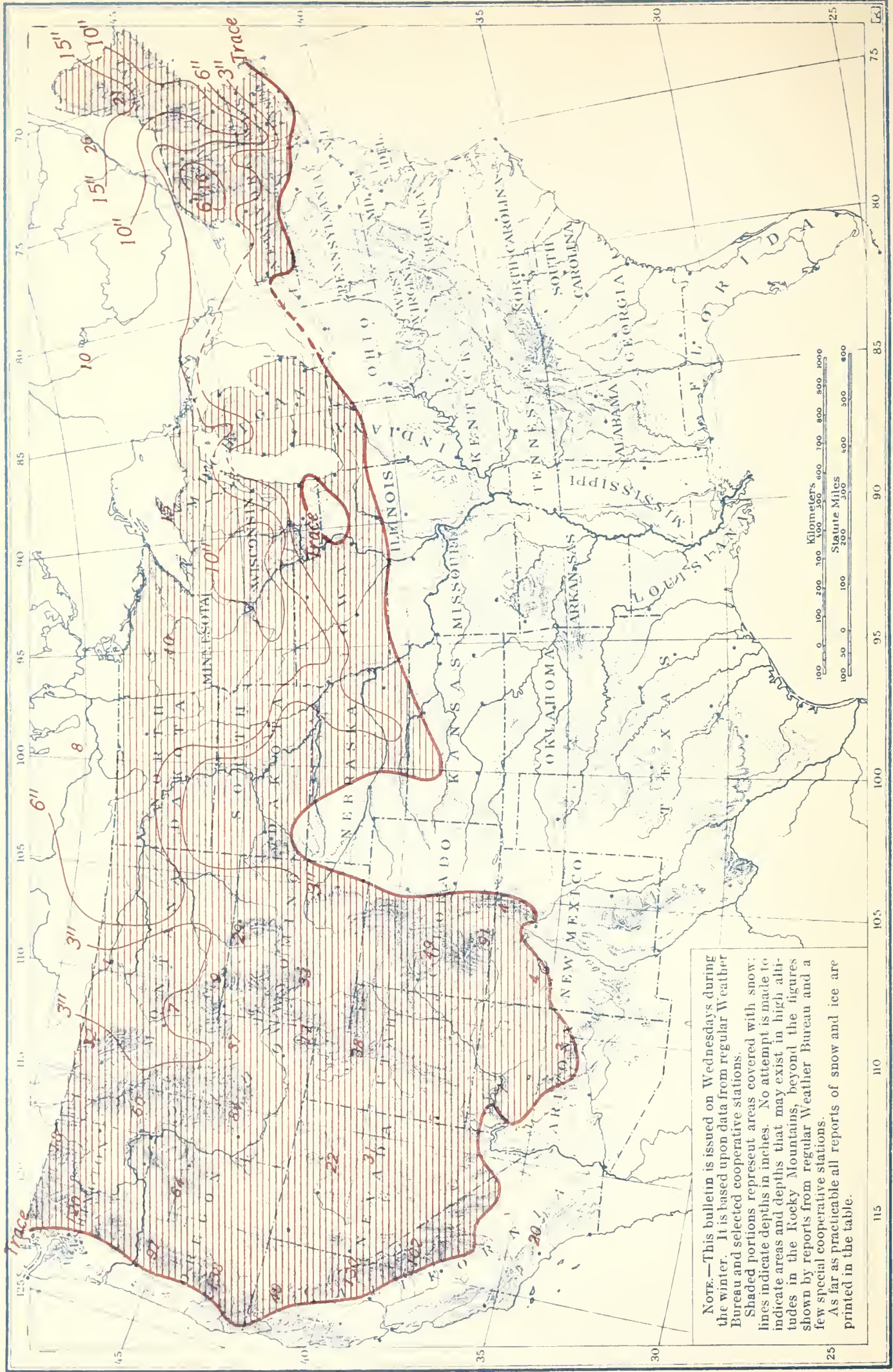
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 8, 1932

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Nebraska</i>	<i>Inches</i>	<i>Inches</i>
Eagle	27	.....	Grand Island	4	.....
Fairbanks	39	41.0	Norfolk	3	.....
Nome	45	35.0	Red Cloud	3	.....
<i>Arizona</i>			<i>Nevada</i>		
Grand Canyon	7	.....	Elko	22	.....
Pinedale	3	.....	McGill	31	.....
<i>California</i>			Winnemucca	5	.....
Blue Canyon	71	.....	<i>New Hampshire</i>		
Huntington Lake	102	.....	Concord	11	7.0
Inskip	83	.....	Keene	11	.....
Mount Wilson	10	.....	Woodsville	6	.....
Soda Springs	130	.....	<i>New Mexico</i>		
Squirrel Inn	20	.....	Bluewater	4	.....
<i>Colorado</i>			Chama	35	.....
Crested Butte	49	.....	Elizabethtown	4	.....
Cumbres	91	.....	Taos	3	.....
Leadville	11	.....	<i>New York</i>		
Rico	39	.....	Albany	2	†
<i>Connecticut</i>			Beaver River	12	.....
Hartford	4	0.0	Buffalo	1	†
West Cornwall	6	.....	Herkimer	5	.....
<i>Idaho</i>			Lake Placid	10	.....
Hailey	34	.....	Lowville	12	.....
Idaho City	35	.....	Oswego	5	0.0
McCall	49	.....	Rome	4	.....
Pierce City	60	.....	<i>North Dakota</i>		
Soldier Creek	43	.....	Devils Lake	6	.....
Spencer	37	.....	Ellendale	11	.....
<i>Illinois</i>			Williston	9	26.0
Chicago	2	.....	<i>Oregon</i>		
Peoria	T.	†	Baker	7	.....
<i>Indiana</i>			Crater Lake	138	.....
Angola	2	.....	Detroit	18	.....
Whiting	1	.....	Lakeview	19	.....
<i>Iowa</i>			Meacham	52	.....
Carroll	4	.....	Olive Lake	64	.....
Des Moines	T.	5.0	Siskiyou	40	.....
Dubuque	T.	7.0	<i>Rhode Island</i>		
Forest City	6	.....	Kingston	T.	.....
Sioux City	3	*†	Providence	2	0.0
<i>Kansas</i>			<i>South Dakota</i>		
Phillipsburg	4	.....	Huron	8	18.5
Wakeeney	2	.....	Yankton	2	20.0
<i>Maine</i>			<i>Utah</i>		
Gardiner	9	10.0	Duchesne	10	.....
Greenville	21	25.0	Modena	5	.....
Oldtown	10	.....	Ogden	10	.....
Portland	17	0.0	Silver Lake	88	.....
<i>Massachusetts</i>			<i>Vermont</i>		
Amherst	11	.....	Brattleboro	12	0.0
Boston	4	0.0	Burlington	4	0.0
Holyoke	13	0.0	Rutland	5	.....
<i>Michigan</i>			White River Junction	7	.....
Alpena	2	4.0	<i>Washington</i>		
Bessemer	6	.....	Chesaw	18	.....
Escanaba	8	6.5	Snoqualmie Pass	103	.....
Newberry	8	.....	Yakima	5	.....
Port Huron	4	4.0	<i>Wisconsin</i>		
<i>Minnesota</i>			Eau Claire	13	.....
Baudette	8	.....	Green Bay	5	8.0
Duluth	6	13.5	La Crosse	6	12.0
Grand Meadow	12	.....	Park Falls	10	.....
Moorhead	9	21.0	Stevens Point	16	.....
St. Paul	6	3.0	Wausau	9	14.0
Virginia	10	.....	<i>Wyoming</i>		
<i>Montana</i>			Dome Lake	29	.....
Haugan	35	.....	Foxpark	29	.....
Kalispell	12	.....	Sheridan	5	.....
Miles City	6	.....	South Pass City	33	.....
Red Lodge	9	.....	Yellowstone Park	22	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., February 8, 1932



Note.—This bulletin is issued on Wednesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations. Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist in high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations. As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 10

WASHINGTON, D. C., FEBRUARY 17, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED FEBRUARY 15

There was light to moderate snowfall early in the week over considerable portions of New York and New England. About this time marked warmth for February set in over the Plains and the Mississippi Valley, and by the 10th or 11th extended to the Atlantic States. The mildness did not last many days, however, and by the 13th cooler weather had replaced it almost everywhere, so the latter part of the week was a time of about normal temperature in most central and eastern regions. There had been some snowfall in the north-central portion of the country about the middle of the week, the falls being largest at this time in northwestern Minnesota. The latter part of the week brought snowfall to the middle and lower Missouri Valley, the central Plains, the middle and southern Rocky Mountain and Plateau regions, and some mountain areas in southern California.

DEPTH OF SNOW ON GROUND

A small area in south-central New York and adjacent Pennsylvania has gained a little snow during the week, but practically no other district east of the Mississippi River shows an increase. To westward of that river a great part of the country shows increased amounts, particularly the lower and middle Missouri Valley, the middle Plains, the central Rocky Mountain region, the higher portions of Utah and Arizona, and the mountains of southern California. Several stations in Arizona and southern California have gained more than a foot. In central and northern California and northern Nevada most lofty stations report less snow than a week ago, while a decided and almost universal decrease of depth is noted from northern Iowa and southeastern Minnesota eastward to the New England coast, the losses being from half a foot to a foot at many stations in Wisconsin, the Adirondacks, and northern New England.

The shallow cover present last week in southern Michigan and the near-by parts of Ohio and Indiana has gone, but meantime a snow cover has come to northern Missouri and a great part of Kansas. The prolonged cover in most portions of the Dakotas, notably in the counties east of the Missouri River, has kept livestock from outdoor feeding to an unusual extent.

Near Lake Superior there is now a moderate amount of snow, but the southern half of the upper Lake region has much less than usual in February; in fact, much of it has none at all. The vicinity of Lake Erie and the Ohio Valley are almost completely free from snow, as has been the case most of the season to date.

ICE IN RIVERS AND HARBORS

Though there is no ice reported now in the Mississippi River below Davenport, Iowa, yet elsewhere changes noted in the ice situation since the 8th are mainly slight increases in the amounts, particularly in the Dakotas, near Lake Superior, and in northern New England. There is now some ice in most of the lower Connecticut River.

In Pennsylvania and New York no ice of consequence has been cut as yet this season, and melting this week in the ponds of southern Michigan stopped the harvesting there. From northern Michigan to Montana the gathering has continued. In Minnesota ice of more satisfactory thickness is now being put away, but the ice lately cut in Wisconsin is largely of poor quality.

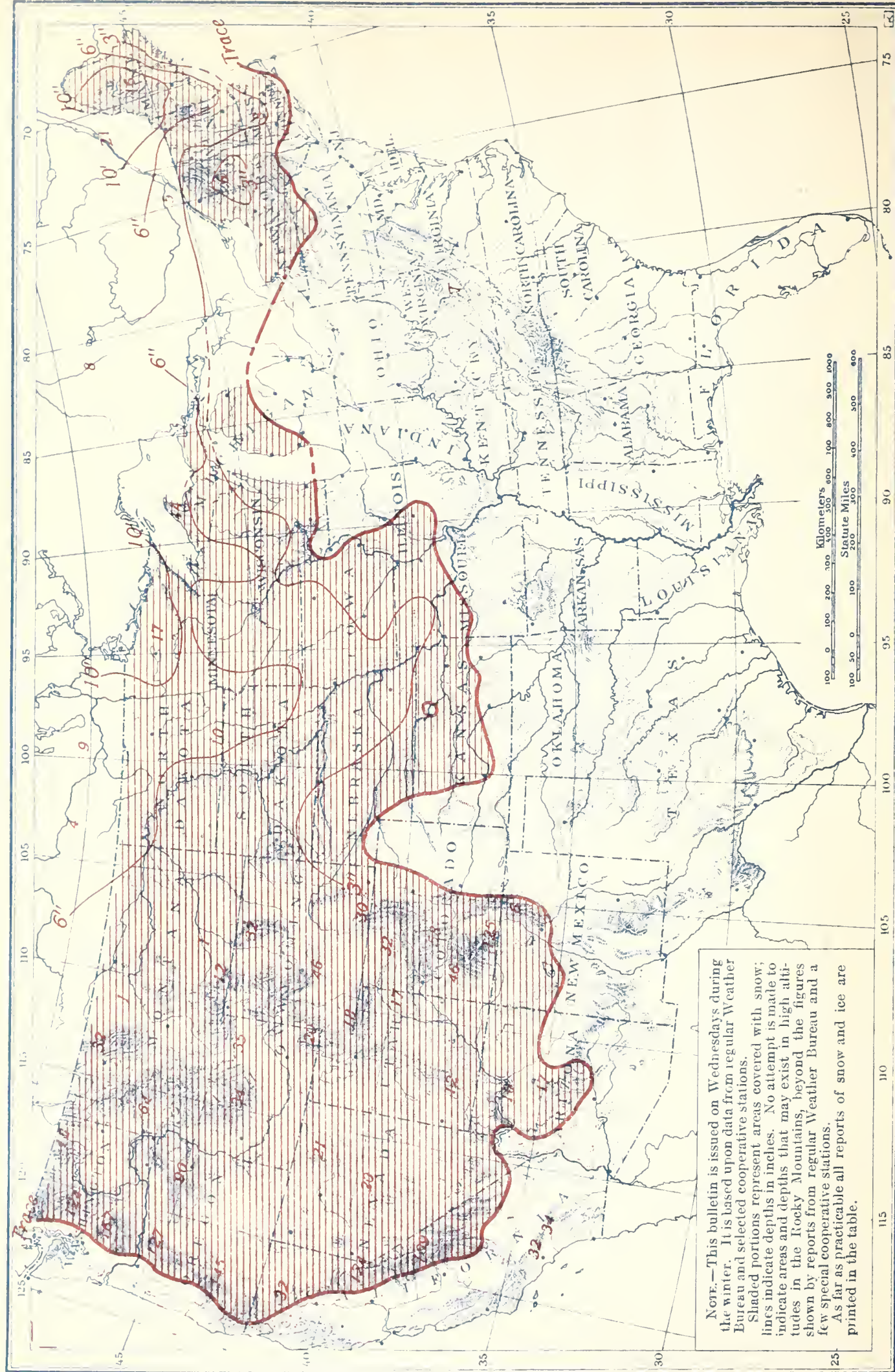
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 15, 1932

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Montana</i>	<i>Inches</i>	<i>Inches</i>
Fairbanks	45	41.0	Belton	32	.....
Fort Yukon	28	.....	Kalispell	12	.....
Nome	44	36.0	Miles City	5	.....
<i>Arizona</i>			Thompson Falls	16	.....
Flagstaff	17	.....	<i>Nebraska</i>		
Prescott	15	.....	Auburn	4	.....
Williams	12	.....	Lincoln	3	.....
<i>California</i>			Valentine	3	.....
Big Creek	14	.....	<i>Nevada</i>		
Huntington Lake	109	.....	Austin	20	.....
Mount Wilson	32	.....	Minden	8	.....
Yosemite	28	.....	North Fork	21	.....
<i>Colorado</i>			<i>New Hampshire</i>		
Cumbres	125	.....	Berlin	4	.....
Durango	10	.....	Concord	5	10.0
Steamboat Springs	32	.....	Lancaster	5	.....
<i>Connecticut</i>			Pittsburg	19	.....
Hartford	1	†	<i>New Mexico</i>		
<i>Idaho</i>			Elizabethtown	6	.....
Big Creek	40	.....	Truchas	2	.....
Ketchum	32	.....	<i>New York</i>		
Pierce City	64	.....	Beaver River	6	.....
Shake Creek	46	.....	Buffalo	T.	*
Vienna Mine	84	.....	Corinth	5	.....
<i>Iowa</i>			Lake Placid	2	.....
Atlantic	3	.....	Lowville	2	.....
Des Moines	1	5.0	Rochester	2	0.0
Dubuque	0	7.5	Saranac Lake	2	.....
Iowa Falls	4	.....	Syracuse	3	.....
Pocahontas	7	.....	<i>North Dakota</i>		
Sioux City	2	*†	Ellendale	10	.....
<i>Kansas</i>			Williston	8	27.0
Dodge City	1	.....	<i>Oregon</i>		
McPherson	2	.....	Crater Lake	115	.....
Osage City	3	.....	Fish Lake	68	.....
Topeka	1	.....	Government Camp	127	.....
Wakeeney	4	.....	Imperial Mine	90	.....
<i>Maine</i>			Welches	22	.....
Farmington	11	.....	<i>South Dakota</i>		
Gardiner	8	12.0	Pierre	2	22.5
Greenville	16	24.0	Yankton	2	18.0
Millinocket	16	.....	<i>Utah</i>		
Portland	6	0.0	Cedar City	12	.....
<i>Massachusetts</i>			Logan	17	.....
Boston	T.	0.0	Manti	7	.....
Holyoke	8	4.0	Richfield	6	.....
Stockbridge	2	.....	Watson	17	.....
<i>Michigan</i>			<i>Vermont</i>		
Cadillac	1	.....	Bellows Falls	4	.....
East Jordan	4	.....	Brattleboro	7	3.0
Elmira	3	.....	St. Johnsbury	3	.....
Houghton	14	10.5	<i>Washington</i>		
Iron Mountain	5	.....	Paradise Inn	167	.....
Marquette	2	2.0	Snoqualmie Pass	124	.....
Munising	9	.....	Twisp	18	.....
Sault Ste. Marie	8	5.0	<i>West Virginia</i>		
<i>Minnesota</i>			Hinton	T.	.....
Big Falls	17	.....	<i>Wisconsin</i>		
Duluth	5	15.0	Ashland	8	.....
Ely	14	.....	La Crosse	1	13.0
Leech Lake Dam	17	.....	Medford	8	.....
Moorhead	9	22.0	Rhinelander	4	.....
St. Paul	3	3.0	Stevens Point	8	.....
Thief River Falls	16	.....	Wausau	3	11.5
<i>Missouri</i>			<i>Wyoming</i>		
Brunswick	6	.....	Alta	42	.....
Kansas City	1	0.0	Dixon	26	.....
Maryville	4	.....	Evanston	18	.....
St. Joseph	3	.....	Foxpark	30	.....
Unionville	6	.....	Lander	5	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., February 15, 1932



NOTE.—This bulletin is issued on Wednesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.

Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist in high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 11

WASHINGTON, D. C., FEBRUARY 24, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED FEBRUARY 22

Though some snow fell the 20th-21st in parts of Washington, yet in general the week saw no important snowfall in the north-western quarter of the country. There was considerable snowfall in the higher districts from southern California to Colorado and northern New Mexico, nearly all of it during the first half of the week. In portions of the Lake region, particularly near Lake Superior, snow occurred frequently, while moderate to fairly heavy falls were noted from the middle Missouri Valley to the upper Lakes, and in northern New York and New England during the 16th-18th. Small to moderate amounts fell on or about the 20th in western New York and a little during the night of the 21st-22d in part of the mountain sections of the Virginias. As a whole, the week was colder than normal west of the Divide and in much of the Northeast, and was not far from normal temperature in the north-central part of the country.

DEPTH OF SNOW ON GROUND

Apart from a small area in the mountains of the Virginias, which gained a shallow cover late in the week, there is scarcely a station anywhere in the country reporting snow now while having bare ground a week ago. On the other hand, a snow cover has been lost by much of southern New England, by central and northern Kansas, the southeastern parts of Iowa and Wisconsin, and the limited sections of Missouri and Illinois that had snow last week and by most of central Montana and some valley districts in Wyoming and the far Northwest. Depths have decreased at substantially all stations where snow remains in the far Northwest, from the northern and central mountain portions of California eastward to central Colorado, and nearly throughout the Missouri Valley and western and northern Minnesota. At most of the western mountain stations the decreases are not great compared with the total amount of snow, and probably the water content is not seriously diminished.

In the southern California mountains increases of depth up to 2 feet are noted, while increases of from 3 to 6 inches have occurred in parts of central Wisconsin and northern Michigan.

ICE IN RIVERS AND HARBORS

The past week has brought but little change in the ice situation. The harbors of the lower Lakes continue mainly free from ice, but those of Lake Superior and the northern parts of Lakes Michigan and Huron are generally closed, though the amount of ice is not great for the time of year. Some stations in upper Michigan, Wisconsin, and Minnesota report increases in ice thickness of from 2 to 4 inches, compared with a week ago, but other north-central stations report slightly less ice, especially stations on the upper Mississippi River. In interior New England all reporting stations have thicker ice, and on Moosehead Lake, Maine, the ice is 27 inches thick, a thickness not equaled by any other reporting point in the United States proper.

Ice harvesting has been pushed during the past week in nearly all parts of New England and in some parts of New York, though in the latter the ice is disappointingly thin. In Michigan and Wisconsin the gathering has gone on, but the work is practically done in North Dakota and Minnesota, and is nearing completion in Iowa where the ice lately stored is considerably better than that first cut.

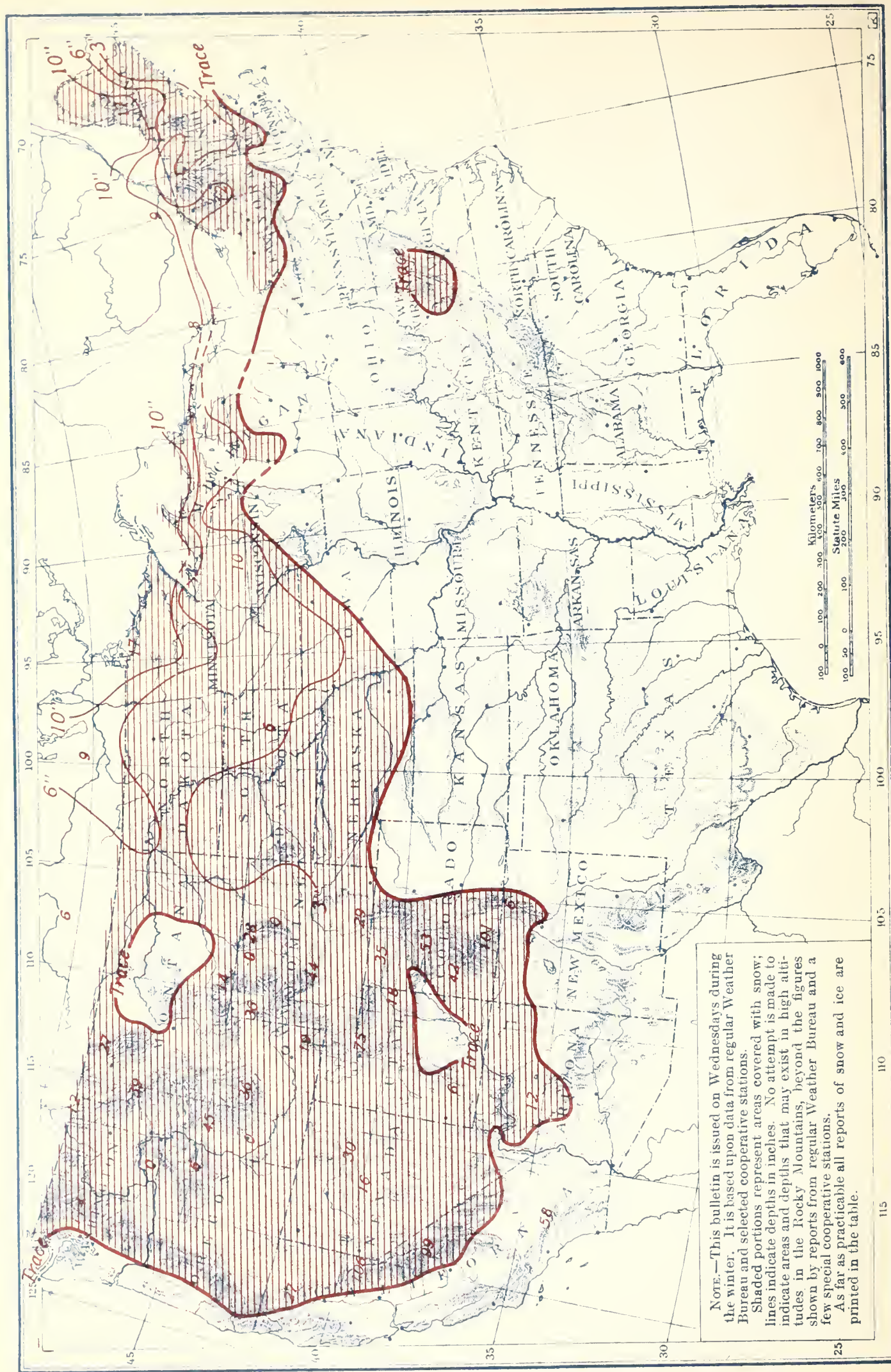
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 22, 1932

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Nebraska</i>	<i>Inches</i>	<i>Inches</i>
Cordova	45	.....	Grand Island	2	.....
Eagle	28	.....	Norfolk	2	.....
Fairbanks	51	43.0	<i>Nevada</i>		
Tanana	56	.....	Arthur	30	.....
<i>Arizona</i>			Austin	16	.....
Flagstaff	9	.....	Elko	18	.....
Prescott	4	.....	Minden	6	.....
Williams	12	.....	Winnemucca	2	.....
<i>California</i>			<i>New Hampshire</i>		
Big Creek	9	.....	Concord	4	13.0
McCloud	27	.....	Hanover	2	.....
Macumber	35	.....	Keene	5	.....
Soda Springs	106	.....	Pittsburg	21	.....
Squirrel Inn	58	.....	<i>New Mexico</i>		
<i>Colorado</i>			Chacon	5	.....
Crested Butte	53	.....	Chama	36	.....
Cumbres	101	.....	Elizabethtown	6	.....
Dillon	18	.....	Truchas	5	.....
Leadville	8	.....	<i>New York</i>		
Rico	42	.....	Beaver River	8	.....
<i>Idaho</i>			Binghamton	T.	*
Hailey	29	.....	Canton	3	.....
Idaho City	32	.....	Ithaca	2	.....
Kellogg	23	.....	Malone	2	.....
McCall	45	.....	Ogdensburg	5	.....
Porthill	12	.....	Old Forge	12	.....
Soldier Creek	41	.....	<i>North Dakota</i>		
<i>Iowa</i>			Bismarck	3	22.0
Charles City	1	.....	Devils Lake	4	.....
Des Moines	T.	3.0	Williston	8	26.0
Estherville	4	.....	<i>Oregon</i>		
Forest City	5	.....	Baker	6	.....
Pocahontas	4	.....	<i>South Dakota</i>		
Sioux City	1	*†	Huron	6	17.0
<i>Maine</i>			Pierre	T.	23.0
Gardiner	9	13.0	Yankton	2	18.0
Greenville	17	27.0	<i>Utah</i>		
Houlton	10	.....	Duchesne	12	.....
Oldtown	2	.....	Manti	6	.....
Portland	4	0.0	Modena	4	.....
<i>Massachusetts</i>			Ogden	4	.....
Holyoke	6	6.0	Silver Lake	75	.....
Williamstown	T.	.....	Watson	18	.....
<i>Michigan</i>			<i>Vermont</i>		
Alpena	T.	6.0	Brattleboro	4	8.0
Benzonia	3	.....	Burlington	3	0.0
Bessemer	10	.....	Enosburg Falls	2	.....
Escanaba	4	11.0	Northfield	4	.....
Iron River	2	.....	White River Junction	4	.....
Mackinaw	4	.....	<i>Virginia</i>		
Marquette	8	†	Buchanan	T.	.....
Sault Ste. Marie	9	8.0	Dale Enterprise	T.	.....
Sidnaw	7	.....	<i>Washington</i>		
<i>Minnesota</i>			Snoqualmie Pass	114	.....
Baudette	17	.....	<i>West Virginia</i>		
Duluth	3	19.0	Hinton	T.	.....
Fort Ripley	8	.....	<i>Wisconsin</i>		
Grand Meadow	9	.....	Ashland	6	.....
Mankato	6	.....	Eau Claire	9	.....
Roseau	9	.....	Green Bay	0	7.5
Virginia	12	.....	La Crosse	1	12.0
Worthington	6	.....	Medford	10	.....
<i>Montana</i>			Wausau	7	14.0
Belton	27	.....	<i>Wyoming</i>		
Bozeman	4	.....	Alta	36	.....
Haugan	39	.....	Dome Lake	28	.....
Kalispell	10	.....	Foxpark	29	.....
Loweth	7	.....	Sheridan	3	.....
Miles City	5	.....	South Pass City	44	.....
Red Lodge	14	.....	Yellowstone Park	20	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
? indicates trace.

Depth of Snow on Ground, 8 p. m., February 22, 1932



SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 12

WASHINGTON, D. C., MARCH 2, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED FEBRUARY 29

In the northern portion of the country, from the Cascade Mountains eastward to New York State, only a few localities had precipitation of even moderate amount, and most of this was rain. Particularly notable within this area was the unseasonable warmth, which was most marked from Montana and Wyoming eastward to the upper Mississippi Valley.

Considerable portions of New York and New England noted snowfall during the first half of the week, while during the latter half nearly all parts of those States and some portions of Pennsylvania and New Jersey were visited by snow, which, for the most part, was of small quantity.

DEPTH OF SNOW ON GROUND

A few portions of the Middle Atlantic States and New England that were bare last week have now a snow cover, but this is usually shallow, and apparently nowhere is there as much as half a foot of new snow. In the upper Lake region and the upper Mississippi Valley some ground has become bare, while substantially all the snow that was reported last week in Nebraska and the Dakotas has gone. The eastern two-thirds of Montana and the northeastern quarter of Wyoming are now practically without snow, and within the Plateau region the snow has disappeared from most of the lower portions.

At practically all of the stations reporting within the great area from the upper Lake region westward and southwestward to the Pacific coast there is less snow than a week ago. To eastward of the Rocky Mountains the decreases were mainly but a few inches, but in those mountains some stations have depths decreased by from 10 to nearly 20 inches, and similar decreases are noted in portions of the Plateau States. In the Cascades and the Sierra Nevada Mountains the decreases in depth have been as great as 20 inches at several stations, and at a few somewhat more than 30 inches. It is probable that in the higher portions even such decided reductions in depth are due rather to settling than to run-off, and where the lower ground became bare in the Plateau States the soil seemingly absorbed most of the moisture from the snow.

ICE IN RIVERS AND HARBORS

In New England and New York no marked change occurred in the ice conditions. Most New England lakes and portions of rivers that are well inland have ice, the thickness at Greenville, Me., on Moosehead Lake, being 28 inches. Harvesting in New England has progressed well, while in New York it has continued in some localities. The Hudson River from Albany downward has been navigated all the winter, which did not once occur before during the 143 winters for which records are available.

In the northern portion of the upper Lake region the warmth caused much reduction or locally complete disappearance of ice during the past week, but the thickness at Duluth, Minn., still exceeds a foot. In the upper Mississippi River and to westward in the Red River of the North, the Missouri River, and their tributaries the unseasonable mildness brought a great change in ice conditions and the ice has usually gone, especially in the upper Mississippi, or has become unsafe to measure. In many of the smaller streams of North Dakota and Montana the ice broke up. The harvesting of ice in Wisconsin and most of Michigan was stopped, only a small crop having been laid away.

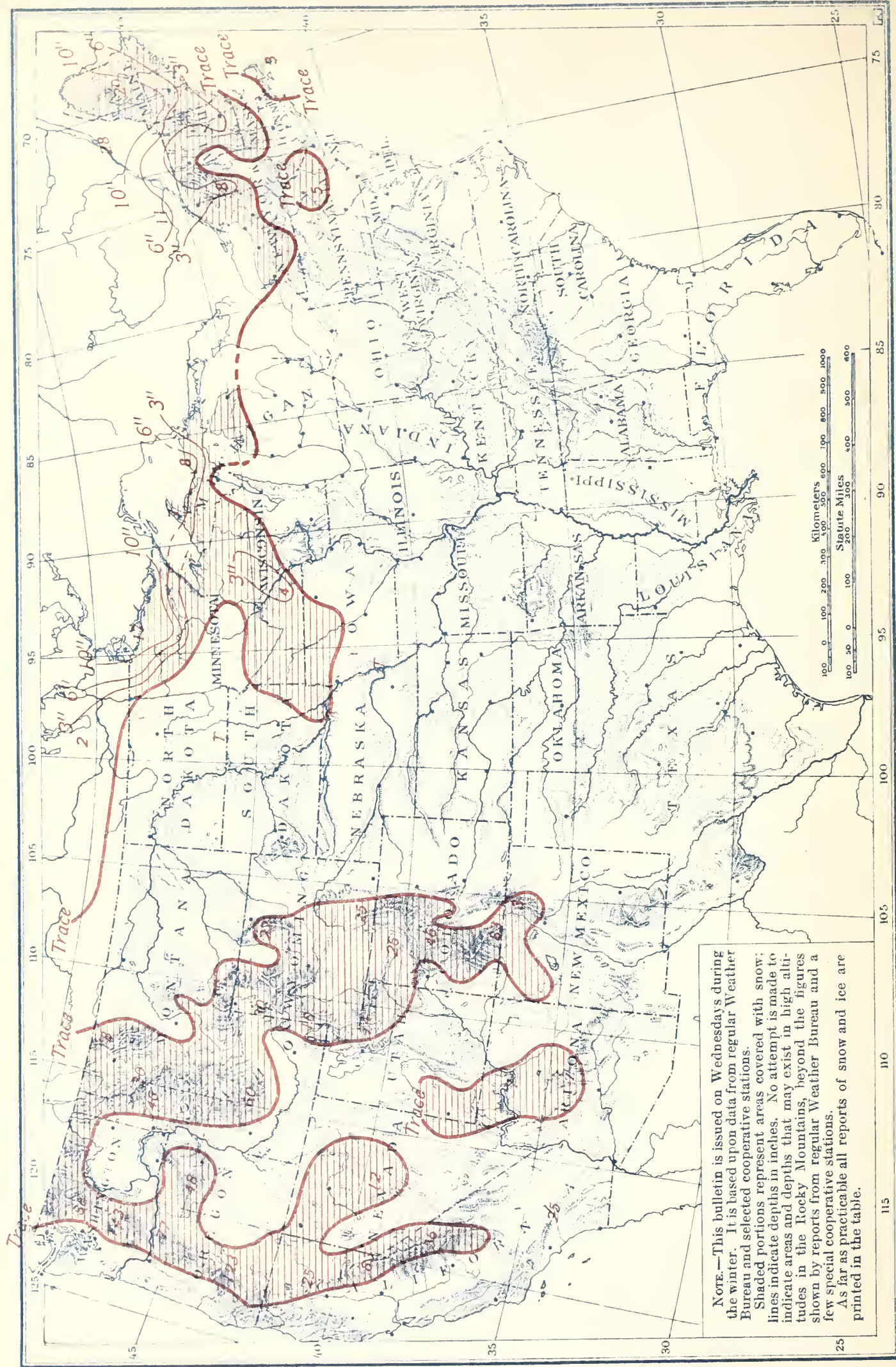
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 29, 1932

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Nevada</i>	<i>Inches</i>	<i>Inches</i>
Cordova	44	.....	Austin	12	.....
Eagle	28	.....	Elko	17	.....
Fairbanks	51	43.0	Minden	2	.....
Tanana	54	.....	<i>New Hampshire</i>		
<i>Arizona</i>			Berlin	3	.....
Flagstaff	T.	.....	Concord	4	12.0
Grand Canyon	7	.....	Hanover	2	.....
<i>California</i>			Lancaster	5	.....
Blue Canyon	46	.....	Pittsburg	19	.....
Huntington Lake	36	.....	<i>New Jersey</i>		
Inskip	60	.....	Newton	T.	.....
Macomber	25	.....	<i>New Mexico</i>		
Mount Wilson	20	.....	Aurora	1	.....
Sierraville	9	.....	Chama	30	.....
Soda Springs	83	.....	Elizabethtown	3	.....
Squirrel Inn	25	.....	<i>New York</i>		
Yosemite	8	.....	Beaver River	8	.....
<i>Colorado</i>			Herkimer	2	.....
Crested Butte	46	.....	Jeffersonville	2	.....
Cumbres	83	.....	Lake Placid	2	.....
Rico	30	.....	Malone	5	.....
Steamboat Springs	26	.....	Ogdensburg	3	.....
<i>Idaho</i>			Plattsburg	1	.....
Big Creek	30	.....	Rome	2	.....
Hailey	18	.....	Saranac Lake	2	.....
Idaho City	22	.....	<i>North Dakota</i>		
Ketchum	32	.....	Ellendale	T.	.....
McCall	37	.....	<i>Oregon</i>		
Mackay	10	.....	Baker	4	.....
Montpelier	10	.....	Crater Lake	123	.....
Pierce City	46	.....	Fish Lake	60	.....
Spencer	29	.....	Government Camp	77	.....
Vienna Mine	60	.....	Meacham	30	.....
<i>Iowa</i>			Olive Lake	48	.....
Forest City	T.	.....	Siskiyou	9	.....
Pocahontas	T.	.....	Wallowa	14	.....
Sioux City	0	*†	Welches	7	.....
<i>Maine</i>			<i>Pennsylvania</i>		
Eastport	4	0.0	Freeland	5	.....
Farmington	14	.....	Seranton	T.	.....
Gardiner	7	14.0	<i>Rhode Island</i>		
Greenville	17	28.0	Kingston	T.	.....
Houlton	10	.....	<i>South Dakota</i>		
Millinocket	20	.....	Huron	0	§
Van Buren	16	.....	Yankton	T.	§
<i>Massachusetts</i>			<i>Utah</i>		
Amherst	2	.....	Duchesne	10	.....
Holyoke	2	5.0	Logan	10	.....
Nantucket	3	0.0	Silver Lake	74	.....
Stockbridge	1	.....	Watson	16	.....
<i>Michigan</i>			<i>Vermont</i>		
Bessemer	2	.....	Brattleboro	2	6.5
East Jordan	3	.....	Burlington	2	*
Houghton	7	§	Northfield	5	.....
Munising	8	.....	White River Junction	3	.....
<i>Minnesota</i>			<i>Washington</i>		
Baudette	17	.....	Chesaw	10	.....
Big Falls	10	.....	Paradise Inn	143	.....
Duluth	T.	13.5	Snoqualmie Pass	88	.....
Ely	12	.....	<i>Wisconsin</i>		
Grand Meadow	4	.....	Green Bay	0	2.5
Leech Lake Dam	12	.....	La Crosse	0	6.0
Roseau	8	.....	Medford	4	.....
Virginia	5	.....	Park Falls	2	.....
<i>Montana</i>			Wausau	1	3.5
Belton	18	.....	<i>Wyoming</i>		
Haugan	30	.....	Dixon	12	.....
Loweth	1	.....	Evanston	20	.....
Red Lodge	2	.....	Foxpark	25	.....
Thompson Falls	4	.....	Yellowstone Park	14	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., February 29, 1932



NOTE.—This bulletin is issued on Wednesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.

Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist in high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 13

WASHINGTON, D. C., MARCH 9, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION

OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED MARCH 7

Early in the week some snow fell in parts of New England and in the northernmost districts from Idaho to Michigan. On the 2d an important storm was centered over the Pacific Northwest, whence it moved rapidly southeastward to the Gulf of Mexico by the 5th. In connection with this storm and the marked high pressure in northwestern Canada, snowfall occurred in the northern and central portions of the Plateau, Mountain, and Plains regions, and by the 5th in the upper Mississippi and lower Missouri Valleys.

From the Gulf the storm advanced northeastward, with great intensity, and at the end of the week was off the New England coast, snow having fallen in most parts of Virginia and Kentucky and the States to the northward, heavy falls occurring in some localities near Lakes Michigan and Ontario and in many mountain sections from the Virginias to northern New York. Moderate amounts of snow fell late in the week within a fairly narrow strip from the northern Plateau to Kansas and western Missouri. The week averaged decidedly cold from the northern and middle Rocky Mountains to the upper Lakes and the Ohio Valley, while the final days were cold in the Atlantic States.

DEPTH OF SNOW ON GROUND

From the northern limits of North Carolina, Tennessee, and Arkansas northward almost all areas now have a snow cover, a situation quite different from that shown by any previous Bulletin of this season. However, the depths are small, for the most part, reaching 5 to 15 inches or more only in limited portions of Pennsylvania, New York, and extreme northeastern New England, and from western Michigan to eastern Minnesota. The Plains now have a cover practically everywhere southward to the northern edge of Oklahoma, but only a scanty one in much of Kansas and eastern Nebraska. The eastern slope of the Rocky Mountains has gained a cover southward to central Colorado, but to westward of the Rocky Mountain Divide the ground is bare almost exactly where it was a week ago. At a decided majority of the far-western stations now having snow the depths have decreased, except in the northernmost portions where increases are usually indicated. Several stations in Montana and Colorado have gained more than a foot in depth.

From the Rocky Mountain slope eastward most stations that had snow last week have now considerably more, though a few stations in northern Minnesota and many in eastern New England have less snow.

ICE IN RIVERS AND HARBORS

In New England there usually is less ice than last week, and the Ohio River and its tributaries continue without important ice; but in the upper Mississippi River and along the shores of the Great Lakes there is now a little ice at most points where it had previously gone, and a few localities in upper Michigan note decided increases in thickness. Cutting of ice in Michigan has been resumed. In the Dakotas there is at most places much thicker ice than a week ago.

The ice conditions of the Great Lakes are summarized in the following telegram from the official in charge at Detroit, Mich.:

Lake Superior: Except some ice in bays, no fields reported. St. Marys River, ice ranges from 3 to 6 inches. Green Bay: Broken ice fields. Lake Michigan: No ice fields, except at straits where some ice reported. Lake Huron: Practically no fields. St. Clair River open. Lake St. Clair and Detroit River, light ice running this morning. Lakes Erie and Ontario: No fields. St. Lawrence River open at Ogdensburg, N. Y.

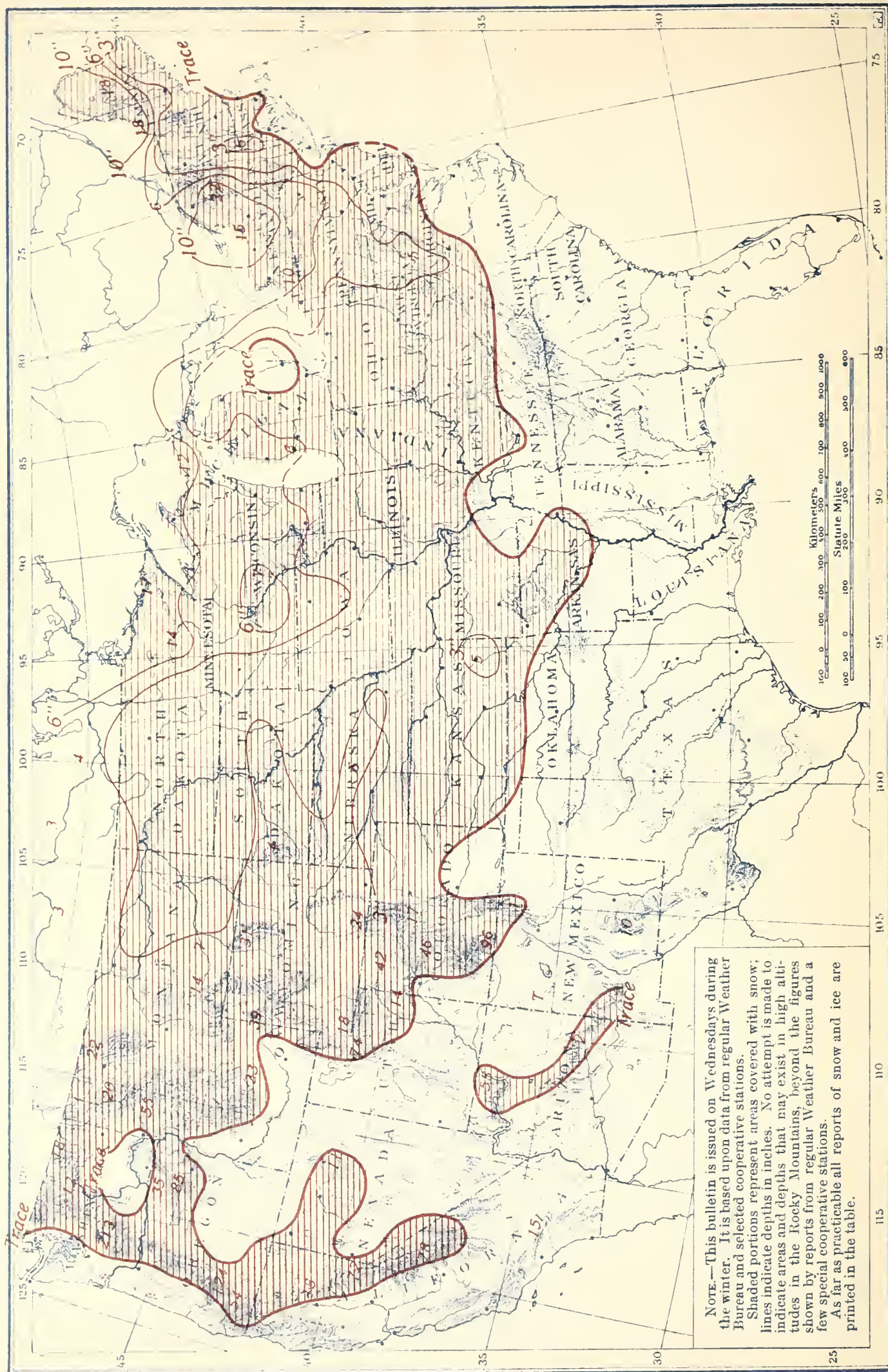
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., MARCH 7, 1932

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Arizona</i>	<i>Inches</i>	<i>Inches</i>	<i>Nebraska</i>	<i>Inches</i>	<i>Inches</i>
Bright Angel	58	.....	Alliance	3	.....
Grand Canyon	3	.....	Lincoln	3	.....
<i>California</i>			Omaha	1	.....
Huntington Lake	78	.....	Valentine	2	.....
Soda Springs	72	.....	<i>Nevada</i>		
Squirrel Inn	15	.....	Elko	11	.....
<i>Colorado</i>			Winnemucca	T.	.....
Crested Butte	46	.....	<i>New Hampshire</i>		
Cumbres	96	.....	Berlin	1	.....
Steamboat Springs ..	42	.....	Concord	T.	10.0
<i>Connecticut</i>			Pittsburg	18	.....
West Cornwall	3	.....	<i>New Jersey</i>		
<i>District of Columbia</i>			Cape May	2	.....
Washington	1	0.0	Newton	3	.....
<i>Idaho</i>			<i>New Mexico</i>		
Montpelier	14	.....	Cloudcroft	10	.....
Pierce City	55	.....	Fort Bayard	2	.....
<i>Illinois</i>			<i>New York</i>		
Chicago	T.	.....	Binghamton	8	.....
Freeport	2	.....	Old Forge	22	.....
Monmouth	2	.....	Oswego	15	0.0
Springfield	T.	.....	Rochester	14	0.0
<i>Indiana</i>			<i>North Dakota</i>		
Fort Wayne	1	.....	Bismarck	2	22.0
La Fayette	2	.....	Williston	3	33.0
Notre Dame	2	.....	<i>Ohio</i>		
Terre Haute	1	0.0	Cleveland	2	0.0
<i>Iowa</i>			Cortland	5	.....
Charles City	3	.....	Tiffin	1	.....
Des Moines	2	*†	<i>Oregon</i>		
Keokuk	1	2.0	Crater Lake	124	.....
Marshalltown	3	.....	Imperial Mine	85	.....
Sioux City	2	*†	<i>Pennsylvania</i>		
<i>Kansas</i>			Bellefonte	4	.....
Dodge City	1	.....	Harrisburg	3	†
Goodland	3	.....	Pittsburgh	2	0.0
Iola	5	0.0	Reading	4	0.0
Medicine Lodge	2	.....	Scranton	7	.....
<i>Kentucky</i>			<i>South Dakota</i>		
Lexington	T.	.....	Huron	4	9.0
Louisville	T.	0.0	Pierre	3	15.0
Maysville	1	.....	<i>Tennessee</i>		
Williamsburg	T.	.....	Nashville	T.	0.0
<i>Maine</i>			<i>Utah</i>		
Gardiner	4	8.0	Silver Lake	74	.....
Greenville	16	28.0	Watson	14	.....
<i>Maryland</i>			<i>Vermont</i>		
Baltimore	1	0.0	Brattleboro	4	8.0
Princess Anne	T.	.....	Burlington	2	*
<i>Massachusetts</i>			Northfield	3	.....
Holyoke	2	*†	<i>Virginia</i>		
Stockbridge	5	.....	Buchanan	4	.....
Williamstown	6	.....	Dale Enterprise	5	.....
<i>Michigan</i>			Wytheville	1	.....
Escanaba	4	10.0	<i>Washington</i>		
Grand Haven	6	.....	Paradise Inn	213	.....
Grayling	4	.....	Snoqualmie Pass	104	.....
Sault Ste. Marie	4	9.0	<i>West Virginia</i>		
<i>Minnesota</i>			Bayard	4	.....
Duluth	2	14.0	Elkins	4	0.0
Moorhead	1	28.0	Parkersburg	1	0.0
<i>Missouri</i>			Wheeling	5	.....
Brunswick	2	.....	<i>Wisconsin</i>		
Kansas City	T.	†	Green Bay	5	1.0
Unionville	3	.....	La Crosse	4	5.0
<i>Montana</i>			Wausau	2	7.0
Belton	22	.....	<i>Wyoming</i>		
Helena	14	.....	Alta	39	.....
Kalispell	13	.....	Dome Lake	31	.....
Thompson Falls	20	.....	South Pass City	29	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., March 7, 1932



NOTE.—This bulletin is issued on Wednesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.

Shaded portions represent areas covered with snow; unshaded portions indicate depths in inches. No attempt is made to indicate areas and depths that may exist in high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, Chief

No. 14

WASHINGTON, D. C., MARCH 16, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION

OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED MARCH 14

Snowfall of importance occurred only in a few limited areas, but flurries and light falls occurred widely. There were, however, large areas subject to considerable snowfall to which this week brought none, notably in the far Northwest.

Snow reached large portions of the Lake region and the Northeast during the first half of the week, but in the main the quantities were small. There was snowfall about the middle of the week over the southern half of the Rocky Mountain region, the mountains of southeastern New Mexico having especially heavy falls; and some interior portions of the western and middle Gulf States noted light falls. Late in the week snowfall occurred in parts of the Lake region and in much of the Ohio Valley and the middle and southern Appalachian region.

The week was a cold one for practically all the country, and was extraordinarily severe for the time of year to eastward of the Rocky Mountains, save in New England.

DEPTH OF SNOW ON GROUND

Northern and western New England and about all of the Middle Atlantic States, save a strip along the sea coast, now have a snow cover; likewise most of the Ohio Valley and much of the middle and southern Appalachians. Nearly every part of the Lake region is covered, with deep snow in most of central and northeastern New York and in limited parts of Michigan and northeastern Minnesota. In northern Illinois, Iowa, western Minnesota, and the northern half of the Plains there is little bare ground, but the snow cover is generally shallow. In the Rocky Mountain States and to westward the area with cover is not very different from a week ago, though parts of California, Nevada, and southern Oregon have lost their cover.

Almost every station in the Pacific States which had snow last week now has less, although the shrinkages in the high mountains are mainly small compared with the total depths. From Nevada and Idaho eastward to the middle and upper portions of the Mississippi River decreases in depth are the rule, but still farther east there is more snow over considerable areas, notably in nearly all of Michigan and northeastern New York. In central and eastern Pennsylvania and parts of other States adjacent thereto snow depths have decreased, often to the extent of 3 to 6 inches.

ICE IN RIVERS AND HARBORS

In New England and the Hudson River system the week has seen no important change in the ice situation, but the Susquehanna River is frozen at Harrisburg, Pa. The harbors of the Great Lakes nearly all have considerably more ice, while in the Mississippi River floating ice is now seen as far down as Cairo, Ill. Some stations on the Missouri River note more ice, but others report decreases in thickness. Harvesting of ice was resumed in Wisconsin, Michigan, and New York, and a little was cut as far south as Maryland.

The ice conditions of the Great Lakes are summarized in the following telegram from the official in charge at Detroit, Mich.:

Lake Superior: Increased thickness in harbors; no extensive fields in lake. Thicker ice in St. Marys River. Green Bay: More ice fields. No fields in Lake Michigan, except solid at Straits. Lake Huron: Some shore ice and few fields. St. Clair River filling with ice. Lake St. Clair and Detroit River: Ice running all week and packing at mouth. Lake Erie: Extensive fields and windrowed in places; ice not heavy. Lake Ontario: Ice in harbors; no fields in lake.

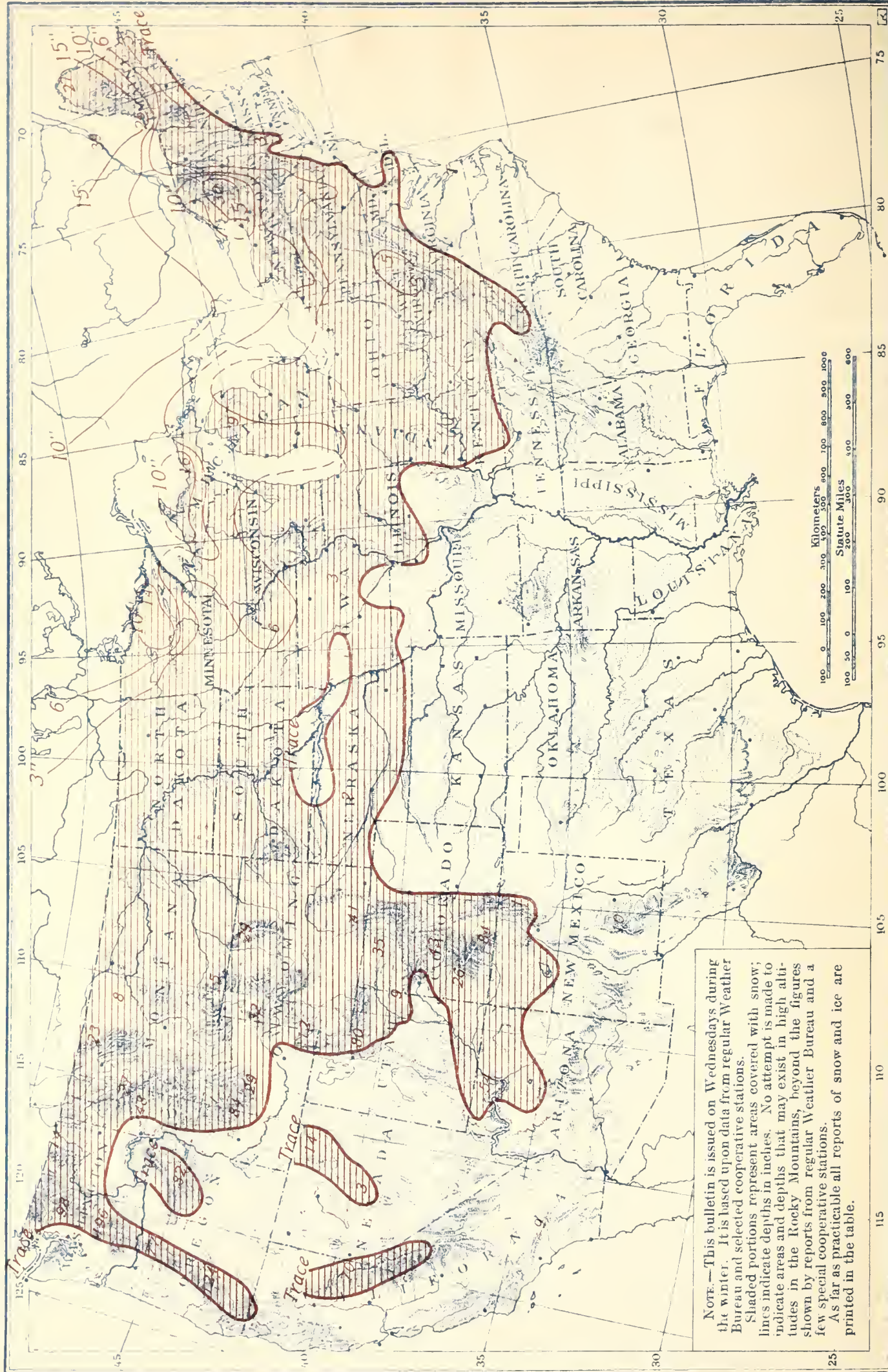
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., MARCH 14, 1932

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Arizona</i>	<i>Inches</i>	<i>Inches</i>	<i>Nebraska</i>	<i>Inches</i>	<i>Inches</i>
Bright Angel	54	.....	Hyannis	2	.....
<i>California</i>			Omaha	T.	5.0
Blue Canyon	20	.....	<i>Nevada</i>		
Inskip	42	.....	Elko	4	.....
Soda Springs	70	.....	North Fork	14	.....
<i>Colorado</i>			<i>New Hampshire</i>		
Cumbres	84	.....	Berlin	4	.....
Dillon	26	.....	Concord	0	10.0
Rico	26	.....	Pittsburg	26	.....
<i>Connecticut</i>			<i>New Mexico</i>		
West Cornwall	1	.....	Chama	22	.....
<i>District of Columbia</i>			Clouderoft	10	.....
Washington	T.	0.0	<i>New York</i>		
<i>Idaho</i>			Beaver River	18	.....
Big Creek	35	.....	Buffalo	5	3.5
McCall	39	.....	Lowville	30	.....
Vienna Mine	84	.....	Malone	15	.....
<i>Illinois</i>			Oswego	17	3.0
Chicago	T.	.....	Syracuse	17	.....
Marengo	1	.....	Warwick	14	.....
Peoria	0	*†	<i>North Dakota</i>		
<i>Indiana</i>			Bismarck	1	15.0
Cambridge City	2	.....	Williston	T.	33.0
Collegeville	3	.....	<i>Ohio</i>		
Notre Dame	5	.....	Ashland	1	.....
Terre Haute	T.	†	Cleveland	2	4.0
Vincennes	1	.....	Millersburg	2	.....
<i>Iowa</i>			<i>Oregon</i>		
Dubuque	T.	*†	Crater Lake	124	.....
Forest City	2	.....	Imperial Mine	82	.....
Keokuk	T.	*†	<i>Pennsylvania</i>		
Waterloo	3	.....	Beaver Falls	2	.....
<i>Kentucky</i>			Confluence	2	*†
Beattyville	1	.....	Freeland	13	.....
Louisville	T.	0.0	Harrisburg	T.	4.0
Maysville	1	.....	Johnstown	4	.....
Williamsburg	1	.....	Pittsburgh	1	0.0
<i>Maine</i>			Warren	8	.....
Farmington	6	.....	<i>South Dakota</i>		
Gardiner	T.	9.0	Huron	T.	11.5
Houlton	16	.....	Pierre	T.	13.0
Van Buren	27	.....	<i>Utah</i>		
<i>Maryland</i>			Silver Lake	80	.....
Baltimore	T.	0.0	Watson	9	.....
<i>Massachusetts</i>			<i>Vermont</i>		
Stockbridge	5	.....	Northfield	3	.....
Williamstown	4	.....	Rutland	3	.....
<i>Michigan</i>			<i>Virginia</i>		
Alpena	2	†	Buchanan	1	.....
Bad Axe	2	.....	Norfolk	T.	0.0
Bessemer	10	.....	Wytheville	1	.....
East Jordan	9	.....	<i>Washington</i>		
Houghton	14	13.5	Paradise Inn	196	.....
Munising	16	.....	Snoqualmie Pass	98	.....
Port Huron	7	5.0	<i>West Virginia</i>		
Sault Ste. Marie	4	12.0	Bayard	5	.....
<i>Minnesota</i>			Bluefield	2	.....
Big Falls	10	.....	Elkins	4	0.0
Duluth	T.	21.0	Flat Top	10	.....
Ely	14	.....	Parkersburg	T.	0.0
Leech Lake Dam	14	.....	Wheeling	1	.....
Moorhead	T.	13.0	<i>Wisconsin</i>		
St. Paul	4	5.0	Ashland	2	.....
<i>Missouri</i>			Green Bay	2	5.0
Kansas City	0	†	La Crosse	T.	10.0
Unionville	T.	.....	Rhineland	4	.....
<i>Montana</i>			<i>Wyoming</i>		
Belton	23	.....	Alta	32	.....
Haugan	27	.....	Foxpark	41	.....
Helena	6	.....	Yellowstone Park	15	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable. T. indicates trace.

Depth of Snow on Ground, 8 p. m., March 14, 1932



SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

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No. 15

WASHINGTON, D. C., MARCH 23, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION

OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED MARCH 21

During the first part of the week snow occurred in a few northern districts and parts of the Appalachian region, but it was of slight importance. Likewise about the middle of the week there was some snowfall in the northernmost States from North Dakota eastward. From the morning of the 20th to the evening of Monday, the 21st, a well-marked storm traveled from southeastern Utah to the middle Ohio Valley, gaining greatly in energy, and snow occurred from the middle Rocky Mountain region eastward to New York, New Jersey, Pennsylvania and the mountains of the Virginias, the falls being heavy from central Kansas to the southwestern part of the Lake region.

The week saw a return to more seasonable temperatures, though it averaged somewhat colder than normal in northern districts from the Missouri Valley to the Atlantic coast.

DEPTH OF SNOW ON GROUND

New England and New York are mostly covered with snow, the depths being considerable in some northern districts. Nearly all of Pennsylvania and western New Jersey are now covered, and in the Lake region there is scarcely any bare ground. From central Missouri and northern Kansas northward almost all the ground is covered, except in North Dakota, where most portions are bare or have but an insignificant amount of snow; the depths are from 4 inches to nearly a foot in northeastern Kansas, eastern Iowa, and northern Minnesota. In the Mountain, Plateau, and Pacific States the week has brought a decrease in the area covered, for the most part, especially in Nevada, Idaho, eastern Washington, and Montana; but on the other hand, parts of Utah and eastern Colorado have gained a cover of snow.

The depths in the western mountains continue mainly normal or greater for the time of year, particularly in the Pacific States, Idaho, Nevada, Utah, Wyoming, and Colorado. Greater depths than a week ago are noted locally in southwestern Oregon, and in parts of Utah and Colorado. The week ends with much more snow than a week ago from the eastern parts of Kansas and Nebraska to southern Michigan, and with much of southern Pennsylvania and New Jersey more deeply covered than ever before during the present winter season. However, over the greater part of the Ohio Valley and to eastward over Virginia and the southern parts of Maryland and Delaware a slight cover has gone, chiefly since the 16th.

ICE IN RIVERS AND HARBORS

The week saw little change in the ice conditions in the New England States. In the Middle Atlantic States the lower Susquehanna lost its ice, and the Hudson and its tributaries have but small quantities. The upper Mississippi River has less ice than a week ago, none being reported now below Keokuk, Iowa. There was a decided decrease in the ice in the Missouri River.

The Great Lakes, as a whole, report about as many decreases as increases, the latter being largely in or near Lake Superior. The ice conditions of the Great Lakes are summarized in the following telegram from the official in charge at Detroit, Mich.:

Lake Superior: Few fields and mostly along shore; harbors closed. No change in St. Marys River. Green Bay: Ice heavier and field stationary. Lake Michigan: Few fields along shore extending out 1 to 4 miles; Straits solid with 8-inch ice, windrowed. Lake Huron: Only few shore fields along west and east shores. St. Clair River slowly filling up, blocked at Algonac. Detroit River ice running most of week. Lake Erie: Fields of 4 to 6-inch ice extend out from shore beyond vision eastward to Conneaut; thence broken fields with some open spaces to Buffalo. Lake Ontario: No fields; harbors mostly closed.

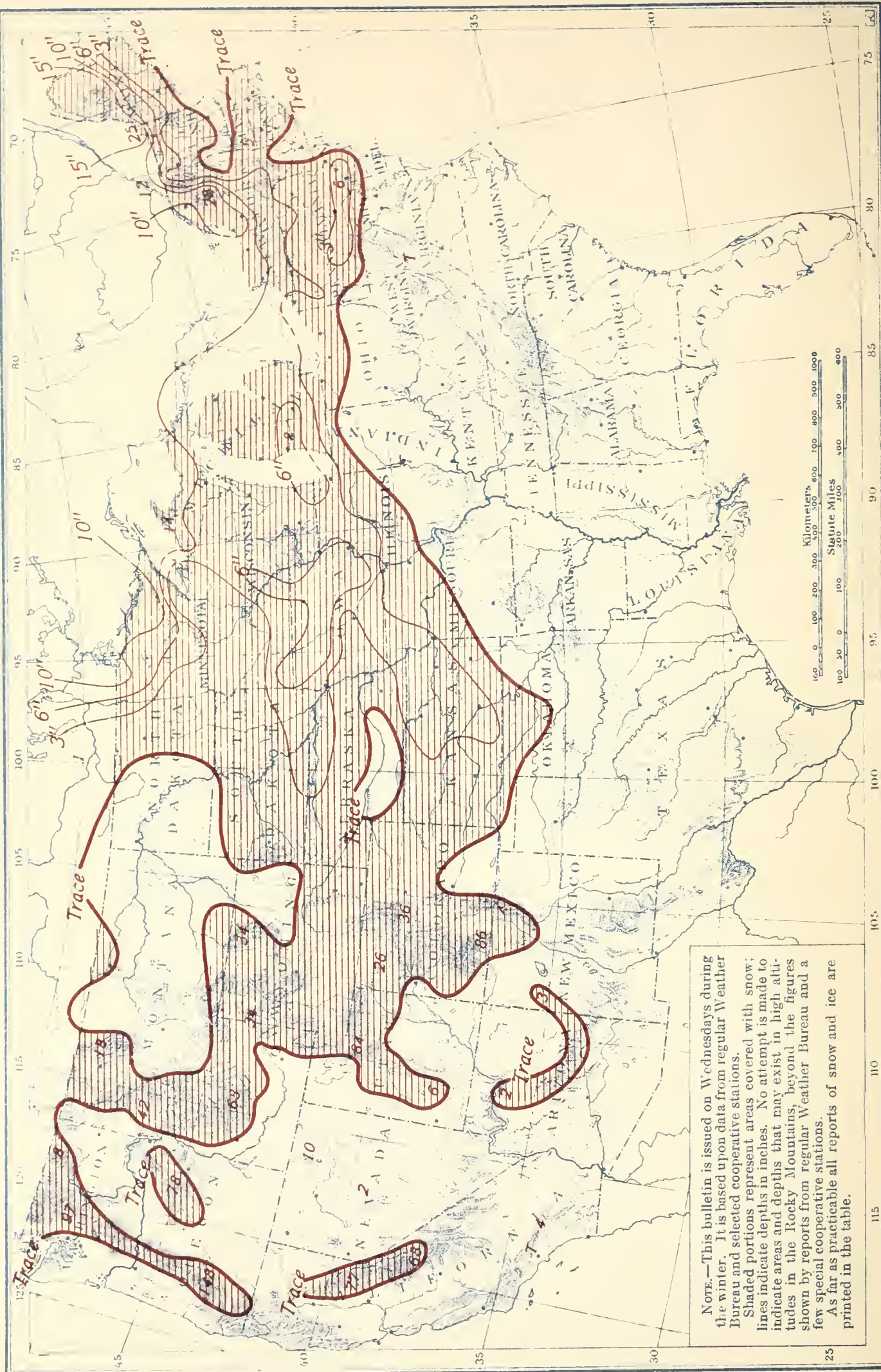
H. C. HUNTER.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., MARCH 21, 1932

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Missouri</i>	<i>Inches</i>	<i>Inches</i>
Bethel.....	24	.....	Hannibal.....	1	0.0
Eagle.....	25	.....	Kansas City.....	5	*
Fairbanks.....	28	49.0	St. Joseph.....	5	.....
Nome.....	36	40.0	<i>Montana</i>		
<i>Arizona</i>			Belton.....	18	.....
Grand Canyon.....	2	.....	Haugan.....	18	.....
Williams.....	2	.....	Loweth.....	2	.....
<i>California</i>			Thompson Falls.....	1	.....
Huntington Lake.....	68	.....	<i>Nebraska</i>		
Soda Springs.....	77	.....	Alliance.....	1	.....
Yosemite.....	40	.....	Broken Bow.....	2	.....
<i>Colorado</i>			Omaha.....	2	†
Crested Butte.....	39	.....	O'Neill.....	4	.....
Cumbres.....	86	.....	Valentine.....	4	.....
Denver.....	1	.....	<i>Nevada</i>		
Steamboat Springs.....	26	.....	Austin.....	2	.....
<i>Connecticut</i>			North Fork.....	10	.....
New Haven.....	1	0.0	<i>New Hampshire</i>		
<i>Delaware</i>			Berlin.....	5	.....
Wilmington.....	3	.....	Concord.....	T.	10.0
<i>Idaho</i>			Pittsburg.....	25	.....
Montpelier.....	4	.....	<i>New Jersey</i>		
Pierce City.....	42	.....	Lakewood.....	2	.....
Soldier Creek.....	28	.....	Moorestown.....	6	.....
Spencer.....	26	.....	<i>New Mexico</i>		
<i>Illinois</i>			Elizabethtown.....	4	.....
Chicago.....	6	.....	Ganemco.....	3	.....
Freeport.....	6	.....	Santa Fe.....	1	.....
Peoria.....	3	0.0	<i>New York</i>		
<i>Indiana</i>			Albany.....	1	0.0
South Bend.....	1	.....	Buffalo.....	6	4.0
Whiting.....	2	.....	Jamestown.....	5	.....
<i>Iowa</i>			Malone.....	14	.....
Charles City.....	5	.....	Old Forge.....	28	.....
Davenport.....	6	*†	Rochester.....	9	4.0
Des Moines.....	2	*†	Watertown.....	15	.....
Dubuque.....	6	*†	<i>Ohio</i>		
Waterloo.....	6	.....	Charlestown.....	1	.....
<i>Kansas</i>			Cleveland.....	3	4.0
Concordia.....	3	.....	Holgate.....	1	.....
Dodge City.....	2	.....	Sandusky.....	2	6.0
McPherson.....	3	.....	<i>Oregon</i>		
Medicine Lodge.....	4	.....	Crater Lake.....	148	.....
Topeka.....	8	.....	Olive Lake.....	57	.....
Wichita.....	4	0.0	<i>Pennsylvania</i>		
<i>Maine</i>			Chambersburg.....	5	.....
Farmington.....	7	.....	Erie.....	1	8.0
Gardiner.....	T.	9.0	Huntingdon.....	6	.....
Greenville.....	16	28.0	Philadelphia.....	4	0.0
Millinocket.....	18	.....	Reading.....	1	0.0
<i>Massachusetts</i>			Towanda.....	4	.....
Nantucket.....	1	0.0	<i>South Dakota</i>		
Stockbridge.....	5	.....	Pierre.....	2	10.0
Williamstown.....	2	.....	Yankton.....	5	†
<i>Michigan</i>			<i>Utah</i>		
Ann Arbor.....	1	.....	Cedar City.....	6	.....
Benzonia.....	6	.....	Silver Lake.....	84	.....
Bloomington.....	4	.....	<i>Vermont</i>		
Detroit.....	3	0.0	Burlington.....	5	*
Grand Rapids.....	8	.....	St. Johnsbury.....	2	.....
Houghton.....	14	14.0	<i>Washington</i>		
Marquette.....	8	†	Snoqualmie Pass.....	97	.....
Sault Ste. Marie.....	2	13.0	<i>Wisconsin</i>		
<i>Minnesota</i>			Eau Claire.....	3	.....
Baudette.....	5	.....	Milwaukee.....	5	0.0
Duluth.....	T.	24.0	Racine.....	7	.....
Ely.....	14	.....	Wausau.....	1	4.5
Grand Meadow.....	6	.....	<i>Wyoming</i>		
Roseau.....	10	.....	Dome Lake.....	34	.....
Worthington.....	10	.....	Yellowstone Park.....	15	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable. T. indicates trace.

Depth of Snow on Ground, 8 p. m., March 21, 1932



NOTE.—This bulletin is issued on Wednesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations. Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist in high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations. As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, Chief

No. 16

WASHINGTON, D. C., MARCH 30, 1932

WINTER 1931-32

CLIMATOLOGICAL DIVISION

OLIVER L. FASSIG, Chief

For the season, 50 cents. Remittance should be made to Superintendent of Documents, Government Printing Office, Washington, D. C.

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED MARCH 28

The vigorous storm noted in the preceding issue as traversing the Ohio Valley continued northeastward, causing snowfall early in the week in many northeastern districts. Various other northern areas, mostly of limited extent, and also much of the central Rocky Mountain region, were visited by snowfall of moderate amount, and as the week drew toward its end a well-developed storm from Texas traveled rapidly to the New England coast, causing heavy snowfall in much of the middle and northern Appalaehian region and some in the upper Ohio Valley and the vicinity of Lake Ontario. The week averaged mostly about as warm as normal, save somewhat warmer in much of the Northwest.

DEPTH OF SNOW ON GROUND

New England, New York, and Pennsylvania are mostly covered, except in their southeastern portions and close to Lake Erie. Most of West Virginia has a snow cover; likewise part of eastern Ohio and some western counties of Maryland and Virginia. From the northeastern part of West Virginia to Maine the mountainous portions generally have quite deep snow, from 8 to about 30 inches, and some valley stations in Vermont, east-central New York, and northern Maine report from 10 to over 20 inches.

The greater part of Michigan, considerable parts of Wisconsin and Minnesota, and a little of North Dakota now have snow on the ground, though it is usually of small amount, save in portions of upper Michigan and northeastern Minnesota. In the Rocky Mountain States and the far West snow is now practically confined to the elevated sections, where several stations report unusual depths, especially in Washington, Oregon, and the east-central part of California. The amounts of snow in the highest portions are mainly greater than the average amounts at this time of year, and give good prospects for a liberal stream flow next summer, being especially great in the Pacific and the central Plateau States and often only about average or slightly less in northern Idaho and adjacent areas and thence southeastward to northern Colorado; also in the southern portions of New Mexico and Arizona.

During the week the snow has disappeared from western New Jersey and adjacent areas and from southeastern New England, and particularly from the vicinity of Lake Erie westward and southwestward to the Plains region, almost all of which has become bare. In eastern Wyoming, northeastern Colorado, and western Utah much ground has been freed from snow. Several stations in Idaho and Oregon note increases of many inches in their depths, but the chief area where snow is now of greater amount is a strip from eastern West Virginia to central Maine.

ICE IN RIVERS AND HARBORS

Only in a few localities, chiefly in the northeastern portion of the country, did the ice hold its own or gain during the week. The Missouri and upper Mississippi Rivers particularly saw marked losses, substantially all the ice noted in them last week disappearing. Several harbors in the Lake region were freed, while others note considerable decreases.

The ice conditions in the Great Lakes are summarized in the following telegram from the official in charge at Detroit, Mich.:

No extensive fields in any lake. Harbors breaking up on Superior. No marked change in St. Marys River. Green Bay covered with firm ice. Straits continued closed. Light ice fields in Lake Erie. Lake Ontario free.

H. C. HUNTER.

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Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>New Hampshire</i>	<i>Inches</i>	<i>Inches</i>
Eagle	22		Concord	9	7.0
Fairbanks	23	48.5	Keene	11	
Fort Yukon	24		Pittsburg	30	
Nome	35	40.0	<i>New Mexico</i>		
<i>Arizona</i>			Aurora	1	
Bright Angel	42		Cloudcroft	T.	
Williams	T.		<i>New York</i>		
<i>California</i>			Albany	14	
Blue Canyon	9		Beaver River	30	
Huntington Lake	64		Binghamton	15	
Inskip	21		Herkimer	22	
Relief	86		Ithaca	9	
Soda Springs	73		Lowville	12	
<i>Colorado</i>			Ogdensburg	10	
Cumbres	83		Old Forge	32	
Dillon	42		Oswego	7	0.0
Rico	19		Poughkeepsie	5	
Steamboat Springs	29		Rome	12	
<i>Idaho</i>			Roxbury	14	
Big Creek	35		Syracuse	12	
Idaho City	14		<i>North Dakota</i>		
Ketchum	20		Devils Lake	T.	
McCall	37		Williston	0	‡
Mascot Mine	36		<i>Oregon</i>		
Pierce City	37		Crater Lake	164	
Spencer	24		Government Camp	74	
Vienna Mine	88		Imperial Mine	84	
<i>Iowa</i>			Olive Lake	60	
Dubuque	T.	0.0	<i>Pennsylvania</i>		
Sioux City	0	†	Freeland	8	
<i>Maine</i>			Gordon	8	
Gardiner	6	‡	Huntingdon	8	
Greenville	29	36.0	Johnstown	7	
Houlton	15		Mifflintown	4	
Portland	9	0.0	Scranton	6	
<i>Maryland</i>			Williamsport	8	
Oakland	14		<i>South Dakota</i>		
<i>Massachusetts</i>			Huron	0	10.0
Amherst	4		Pierre	0	†
Concord	3		<i>Utah</i>		
Holyoke	4	0.0	Silver Lake	87	
Stockbridge	6		<i>Vermont</i>		
<i>Michigan</i>			Brattleboro	12	0.0
Benzonia	3		Burlington	11	†
Bessemer	4		Northfield	10	
Bloomington	2		White River Junction	6	
Houghton	8	13.0	<i>Washington</i>		
Munising	11		Paradise Inn	218	
Newberry	3		Snoqualmie Pass	110	
<i>Minnesota</i>			<i>West Virginia</i>		
Baudette	5		Bayard	18	
Big Falls	6		Bluefield	1	
Duluth	T.	6.0	Clarksburg	1	
Ely	12		Elkins	4	0.0
Leech Lake Dam	6		Fairmont	2	
Moorhead	T.	8.0	Morgantown	2	
Roseau	4		Rowlesburg	5	
Virginia	8		<i>Wisconsin</i>		
<i>Montana</i>			La Crosse	0	†
Belton	15		Park Falls	5	
Haugan	16		Rhineland	2	
Helena	1		Wausau	0	3.5
Red Lodge	3		<i>Wyoming</i>		
<i>Nevada</i>			Alta	30	
Austin	T.		Dome Lake	37	
North Fork	4		Foxpark	40	
			Yellowstone Park	15	

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable. T. indicates trace.

This issue closes the season of the Snow and Ice Bulletin of 1931-32.

Depth of Snow on Ground, 8 p.m., March 28, 1932

